MODERN ECONOMIC THEORY

MODERN
ECONOMIC THEORY

by

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EIGHTH EDITION
(Revised and Modernised)
1959

Published by
PREMIER PUBLISHING COMPANY
DELHI — JULLUNDUR — LUCKNOW
for Shyam Lal Charitable Trust—New Delhi

BOOKS BY THE SAME AUTHOR—

ARTHA SHASTRA KE ADHUNIK SIDDHANTA *being Hindi Version of Modern Economic Theory*	Rs. 10.50
INDIAN ECONOMICS by Dewett and Singh	Rs. 12.50
HINDI VERSION of the above	Rs. 15.00
REFRESHER COURSE IN INDIAN ECONOMICS by Dewett and Verma	Rs. 6.50
HINDI VERSION of the above	Rs. 7.50
REFRESHER COURSE IN ECONOMIC THEORY	Rs 5.50
HINDI VERSION of the above	Rs. 6.00

Published by
PREMIER PUBLISHING CO.
for Shyam Lal Charitable Trust,
16B/4, Asaf Ali Road, New Delhi
(All profits from this book are spent on charities.)

S. CHAND & CO.,
Asaf Ali Road : New Delhi
Fountain : Delhi
Mai Hiran Gate : Jullundur City
Lal Bagh : Lucknow

First Published- 1946
Eighth Edition- 1959

Price : Rs. 11.00 only

Published by G. S. Sharma for Premier Publishing Co. Fountain, Delhi and Printed at Batuja Press, Fateh Puri, Delhi-6.

PREFACE TO THE EIGHTH EDITION

In this edition attempt has been made to make the language more simple and the text more lucid. A couple of mistakes had crept in a few diagrams in the previous edition. They have now been corrected. But what makes this edition an improvement on the previous edition is the fact that Chapters on Theory of Employment, Trade Cycles and Deficit Financing have been re-written. An important addition is the discussion on Welfare State. There is no doubt that this considerably improved edition will serve the teachers and the taught even more fully and more satisfactorily than the previous editions.

August 15, 1959.

KEWAL KRISHAN DEWETT

PREFACE TO THE SIXTH EDITION

The process of modernising *Modern Economic Theory*, started in the previous edition, has been carried further in the present edition. Although the old structure of the book has been retained for the convenience of the teachers and the taught, yet several modern concepts or modern expositions of old concepts have been introduced. In this the author has been guided by the latest trends in University and Public Service Examinations and by the new books coming in the market, *e g.*, Stonier & Hague : *Text Book of Economic Theory.* Several new diagrams or mathematical expositions have been introduced and some old diagrams have been redrawn for correctness and precision. The size of the book has been considerably reduced and made more manageable without in any way sacrificing anything essential. Some old and redundant material has been replaced by what is new and essential. This has necessitated a great deal of recasting and overhauling of the text. The author is confident that the present revision of the book adds to its adequacy to meet fully and satisfactorily the requirements of University and Public Service Examinations.

The author is grateful to his colleague and friend, Professor G. Mathur, M. A. (Cantab.), for kindly looking into various diagrams and some important portions of the book and for making valuable suggestions for improvement.

KEWAL KRISHAN DEWETT

HOSHIARPUR,
May 30, 1956.

CONTENTS

CHAPTER I—THE NATURE AND SCOPE OF ECONOMICS

The Problem of Definition. Is Economics a Science of Wealth? Economics as a Science of Material Welfare. Robbins's Definition. Scope of Economics. Relation of Economics to other Sciences. Laws of Economics. Economic Assumptions. Is Economics a Science? Is Economics also an Art? Methods of the Science of Economics. Value of the Study of Economics. 1—17

CHAPTER II—ECONOMIC TERMS AND BASIC CONCEPTS

Introduction. Utility. Value. Can there be a general rise in values or prices? Wealth. Wealth Classified. Wealth and Income. Wealth and Welfare. 18—25

CHAPTER III—CONSUMPTION

Consumption and its Importance. Propensity to Consume. Human Wants. Necessaries, Comforts and Luxuries. Standard of Living. 26—29

CHAPTER IV—CONSUMPTION (*Contd.*)

LAW OF DIMINISHING UTILITY

Introduction. The Law of Diminishing Marginal Utility. Diagrammatic Representation. Limitations of the Law of Diminishing Utility. The Law of Diminishing Marginal Substitutability. Some Implications of the Law. Marginal Utility or Significance. When a Commodity has several uses. Marginal Utility of Money. Marginal Utility and Price. Practical Importance of the Law of Diminishing Marginal Utility. Marginal Analysis. Can Utility be Measured? 30—39

CHAPTER V—CONSUMPTION (*Contd.*)

THE LAW OF SUBSTITUTION

Introduction. Statement of the Law. Indifference Curves. Properties of Indifference Curves. Superiority of Indifference Curve Analysis to the Marshallian Demand Analysis. Marginal Rate of Substitution. Practical Importance of the Law of Substitution. Limitations of the Law of Substitution. Consumer's Preferences.

CONSUMER'S SURPLUS

Meaning. Consumer's Surplus and the Law of Diminishing Utility. Can Consumer's Surplus be Measured? Criticism of Consumer's Surplus. Importance of the Concept of Consumer's Surplus. Consumer's Preferences. Sovereignty of the Consumer. Limitations on Consumer's Sovereignty. 40—60

CHAPTER VI—DEMAND

Demand. Demand Schedule. The Demand Curve. Why does Demand Curve slope downwards? The Law of Demand. Changes in Demand. Elasticity of Demand. Income Elasticity and Price Elasticity. Relation of Elasticity with the Law of Diminishing Utility. Elasticity of Demand and Consumer's Surplus. What Determines Elasticity of Demand? Measurement of Elasticity. Diagrammatic Representation of Elasticity of Demand. Practical Application of the Concept of Elasticity of Demand. 61—78

CHAPTER VII—PRODUCTION—GENERAL

Meaning of Production. Factors Determining the Volume of Production. Agents of Production.

LAND

Meaning and Importance. Peculiarities of Land. Productivity of Land. Extensive and Intensive Cultivation. 79—84

CHAPTER VIII—LABOUR

Meaning of Labour. Peculiarities of Labour. Malthusian Theory of Population. Criticism of the Malthusian Theory. Modern Theory of Population. The Optimum Theory. Malthusian Theory and Modern Theory Compared. Criteria of Over-population. Is Increasing Population a Curse ? Net Reproduction Rate. Factors of Labour Efficiency. 85—96

CHAPTER IX—MACHINERY AND DIVISION OF LABOUR

Use of Machinery. Does Machinery Create Unemployment ? Division of Labour. Advantages of Division of Labour. Disadvantages of Division of Labour. Division of Labour is limited by the Market.

TERRITORIAL DIVISION OF LABOUR

Localisation. Consequences of Localisation. Decentralisation of Industry. 97—103

CHAPTER X—CAPITAL

Capital, its Nature and Importance. Functions of Capital. Capital Formation. 104—109

CHAPTER XI—THE ENTREPRENEUR AND HIS PROBLEMS

Entrepreneur's Role. Delegation of the Entrepreneurial Functions. The Scale of Production. Concept of Indivisibility. Internal and External Economies. Limits to the Expansion of a Business. Advantages of Small-scale Production. 110—118

CHAPTER XII—FACTORS IN CO-OPERATION

Combination of Factors. Allocation of the Factors. Laws of Returns. Law of Diminishing Returns. Law of Diminishing Returns in a general form. The Importance of the Law of Diminishing Returns in Economic Theory. Law of Increasing Returns. Law of Constant Returns. Rationalization. 119—130

CHAPTER XIII—MOBILITY OF THE FACTORS OF PRODUCTION

Types of Mobility. Mobility of Land. Mobility of Labour. Mobility of Capital. Is Modern Economic System Adaptable ? 131—135

CHAPTER XIV—FORMS OF BUSINESS ORGANIZATION

The Individual Entrepreneur. Partnership. Joint-Stock Company. Merits and Demerits of Joint-Stock Company. Demerits of Holding Company. Co-operative Organisation. State Enterprise 136—145

CHAPTER XV—MONOPOLY

Meaning of Monopoly. Types of Combinations. Factors Favourable to Combination. Circumstances Unfavourable to Combination. Merits and Demerits of Monopolies. Recent Tendencies towards Monopolies. Checks on the Monopolist. Public Control and Ownership of Monopolies. Monopsony. 146—154

CHAPTER XVI—EXCHANGE—MARKETS

Meaning of Market. Evolution of Markets. The Extent of the Market. Market Categories: Perfect Competition. Market Categories: Imperfect Competition. Perfect and Imperfect Markets Market Categories under Imperfect or Monopolistic Competition further classified. Stock Exchange Organisation. Advantages of Stock Exchange. Produce Exchange. Speculation. Benefits and Dangers of Speculation. 155—166

CHAPTER XVII—COST CURVES AND SUPPLY CURVES

Introduction. Supply and Stock. Cost of Production. Prime (Variable) and Supplementary (Fixed) Costs. Total Average and Marginal Costs. Deriving Marginal and Average Cost Curves from Total Cost Curve. The Industry Supply Curve and the Law of Supply. Elasticity of Supply. Increase and Decrease in Supply. Causes of Changes in Supply. A peculiar Supply Curve. 167—176

CHAPTER XVIII—PRICING UNDER PERFECT COMPETITION IN THE SHORT RUN

Equilibrium. Equilibrium of Supply and Demand. Functions of Price Mechanism. Equilibrium—Short Term and the Long Term, the Firm and the Industry. Market Price. When the Commodity is Perishable. Flexible Supply. Fixed Supply. Short Period Normal Price. Price Control and Rationing. Laws of Supply and Demand. 177—189

CHAPTER XIX—LONG TERM NORMAL PRICE UNDER PERFECT COMPETITION

Normal Price and Market Price. Marshall's Theory of Value. Importance of Time Element. The Nature of Long Run Cost Curves and the Determination of Normal Price. Long Period Equilibrium and the Concept of the Optimum Firm. For the Optimum Firm Average Cost equals Marginal Cost. Optimum Firm in Relation to Laws of Return. Optimum Firm *Versus* Marshall's Representative Firm. Summary of Pricing Rules under Perfect Competition. Theory of General Equilibrium. 190—203

CHAPTER XX—REAL COST IN RELATION TO VALUE

Introduction. Alternative, Opportunity or Transfer costs. Labour Theory, The Socialists and the Labour Theory. Marx's Theory of Surplus Value and Exploitation. Criticism of Labour Theory of Value. The Cost of Production Theory of Value. Cost of Reproduction Theory. Marginal Utility Theory of Value. The Influence of Laws of Return on Value. 204—214

CHAPTER XXI—INTER-RELATED VALUES

Joint Supply. Joint Demand. Composite Supply. Composite Demand. 215—219

CHAPTER XXII—VALUE UNDER MONOPOLY

Fixing Monopoly Price. Equalization of Marginal Revenue and Marginal Costs. Marginal Revenue and Average Revenue. Optimum Output Under Monopoly. Laws of Return. Elasticity of Demand and Monopoly Price. Theory of Monopoly Value summed up. Diagrammatic Representation of the Determination of Monopoly Price. Price Discrimination. Price Discrimination by Dumping. Is Monopoly Price a High Price ? Price under Monopsony. Bilateral Monopoly. 220—236

CHAPTER XXIII—VALUE UNDER IMPERFECT COMPETITION

Imperfect or monopolistic competition. How Imperfect Competition may emerge. Value under Imperfect Competition. Selling Costs. Selling Costs and Optimum Output. Size and Number of the Firms under Imperfect Competition. Wastes of Imperfect Competition. Duopoly and Oligopoly. Pricing of New Products. Importance of the Margin. 237—249

CHAPTER XXIV—DISTRIBUTION: GENERAL PRINCIPLES

Introduction. Need for a Separate Theory. The National Dividend. Measurement of National Income. Difficulties of Measuring National Income. The Theory of Marginal Productivity. Pricing of Productive Services. Criticism of the Marginal Productivity Theory. 250—258

CHAPTER XXV—RENT

Meaning of Rent. Ricardian Theory of Rent. Criticism of the Ricardian Theory. Modern Theory of Rent. Rent and Price. Ground Rents and Building Rents. Rent of Mines, Quarries and Fisheries. Quasi-Rent. Rent and Economic Progress. Rent Element in Other Factors. Transfer Earnings. 259—272

CHAPTER XXVI—WAGES

Definition. Nominal *Versus* Real Wages. The Subsistence Theory of Wages. The Wages Fund Theory. Residual Claimant Theory. Marginal Productivity Theory of Wages. Taussig's Theory of Wages. Wages Fluctuations. Wages and the Standard of Living. Wages and Efficiency. Wages and Inventions. Relative Wages. Low Wages of Women. 273—284

CHAPTER XXVII—SOME PROBLEMS OF LABOUR

Trade Unions. Trade Unions and Wages. Merits and Demerits of Trade Unions. Industrial Disputes. Premium Bonus System. Sliding Scale. Profit-sharing. Labour Co-partnership. Works Councils. Minimum Wage. The National Minimum Wage. Settlement of Industrial Disputes. Unemployment. Causes of Unemployment. Remedies for Unemployment. Social Insurance. Social Security. 285—300

CHAPTER XXVIII—INTEREST

Gross and Net Interest. Differences in Interest Rates.

THEORIES OF INTEREST

Productivity Theory of Interest. Abstinence or Waiting Theory of Interest. The Austrian or Agio Theory of Interest. Fisher's Statement of the Theory. Neo-Classical Theory. Keynes's Theory of Interest—Liquidity Preference. Criticism of Keynes's Theory. The Investable Funds Theory of Interest. Marginal Productivity Theory. How Banks Affect Interest. Forced Saving and Voluntary Saving. Short-term and Long-term Rates. Economic Progress and the Rate of Interest. Interest in a Socialist State. Interest and Rent. Interest, Rent and Quasi rent. Effect of Changes in the Value of Money on Interest. Consequences of Changes in Interest Rates. 301 -323

CHAPTER XXIX -PROFITS

Nature of Profits. Analysis of Gross Profits. Profits, a Reward for Risk-bearing. Dynamic Theory of Profits. Profits, a Reward for Uncertainty-bearing. Monopoly and Profit. Profits and Wages. Is Profit a kind of Rent ? Normal Profits. Do Profits tend to Equality ? Profit and Marginal Productivity. The Function of Profit. 324—334

CHAPTER XXX MECHANISM OF EXCHANGE

NATURE AND FUNCTIONS OF MONEY

Meaning of Money. Difficulties of Barter. Evolution of Money. Functions of Money. Qualities of Good Money Material. Coins and Coinage. Paper Money. Bank Money Money of Account. Some other forms of Money. Gresham's Law. Indian Monetary System. 335- 346

CHAPTER XXXI—MONETARY SYSTEMS

Bimetallism. Silver Standard. Gold Circulation Standard. Gold Bullion Standard. Gold Exchange Standard. Gold Parity Standard. Advantages and Disadvantages of Gold Standard. Gold Standard in Practice. Rules of the Gold Standard Why Gold Standard broke down ? The Future of Gold Standard. Functions of Gold Standard. The Causes of Gold Movements. Paper Standard or Managed Paper Currency or Currency Exchange Standard. The Best Currency System. 347 361

CHAPTER XXXII—THE VALUE OF MONEY

Introduction. The Quantity Theory of Money. Professor Irving Fisher's Equation of Exchange. Criticism of the Quantity Theory. Supply and Demand Theory of Money. The Cambridge Monetary Equation. Elasticity of Demand for Money. 362—374

CHAPTER XXXIII—MONEY AND PRICES

Inflation, Deflation, etc. Consequences of Changing Prices. Index Numbers. Uses and Limitations of Index Numbers. Price Stabilization. Difficulties of Price Control Function of Price Mechanism. Dear Money *Vs.* Cheap Money. Neutral Money Policy. Objectives of Monetary Policy. 375—391

CHAPTER XXXIV—CREDIT

What is Credit ? Credit Instruments. Clearing House. Factors Determining the Volume of Credit. Utility and Functions of Credit. Dangers of Credit. Credit and Prices. Credit and Capital. 392—397

CHAPTER XXXV—BANKING

Evolution of Banks. Kinds of Banks. General Banking Functions. Creation of Credit and its Limitations. Maintenance of Reserves. Importance of Liquidity. Usefulness of Banks. 398—407

CHAPTER XXXVI—MONEY MARKET AND CENTRAL BANKS

Money Market. The Constituents of the Money Market. Central Bank. Reserve Bank Balance Sheet. Central Banking Principles. Central Banking Functions. The Note-Issuing Agency. Principles of Note-Issue. System of Note-Issue in Different Countries. Banker of the State. The Banker's Bank. The Control of Credit: The Objectives. Difficulties of Credit Control. The Bank Rate Policy. Keynes's View of the Bank Rate Policy. Open Market Operations. Credit Rationing. Other Methods. Lender of Last Resort. Nationalisation of Central Banks. International Bank for Reconstruction and Development. 408—432

CHAPTER XXXVII—THEORY OF INTERNATIONAL TRADE

Why separate Theory of International Trade. The Theory of Comparative Costs. Why International Trade is Competitive? The Gain from International Trade. Factors Determining the Size of the Gain. Terms of Trade. Advantages of Foreign Trade. Disadvantages of Foreign Trade. 433—444

CHAPTER XXXVIII—FREE TRADE *Vs.* PROTECTION

The Theory of Free Trade. Protectionism. Arguments for Protection. Arguments against Protection. Barriers to Foreign Trade. 445—452

CHAPTER XXXIX—BALANCE OF PAYMENTS

Balance of Trade and Balance of Payments. Items entering Balance of Payments. Equilibrium of Balance of Payments. India's Balance of Payments. How Disequilibrium may be corrected? 453—460

CHAPTER XL—FOREIGN EXCHANGE

Meaning of Foreign Exchange. Titles to Foreign Money. Rates of Exchange. Rates of Exchange under Gold Standard. Specie Points. Exchange between Gold and Silver Standards. Exchange between Inconvertible Paper Currencies—Purchasing Power Parity. Criticism of the Purchasing Power Parity Theory. Fluctuations of the Rate of Exchange. Limits to Exchange Fluctuations. Equilibrium Rate of Exchange. Correcting Disequilibrium under Gold Standard. Correcting Disequilibrium under Inconvertible Paper. Exchange Stability *Vs.* Price Stability. Fluctuating *Vs.* Fixed Exchange. Exchange Control. Forward Exchange. Arbitrage Operations. The International Monetary Fund. Comparison with International Gold Standard. 461—486

CHAPTER XLI—THEORY OF EMPLOYMENT

Aggregate Output and Employment. Types of Unemployment. Frictional unemployment. Seasonal unemployment. Keynesian unemployment. Determinants of the volume of employment and investment. Consumption Functions. Savings curve. The concept of multiplier. Equilibrium level of income and employment. The Concept of Full Employment. Policy regarding unemployment. 487—496

CHAPTER XLII—TRADE CYCLES

What is a Trade Cycle? Course of a Trade Cycle. Characteristics of a Trade Cycle.

THEORIES OF TRADE CYCLE

Modern Theory of the Trade Cycle: Introductory. Acceleration Principle. Inter-relation of the Multiplier and the Acceleration. Modern Theory of the Trade Cycle Further Explained. Remedial Measures to fight economic crises. Monetary Policy. Fiscal Policy. International Measures. 497—510

CHAPTER XLIII—PUBLIC ECONOMICS

Introduction. Views on State Activity. Functions of a Modern State. Sphere of State Intervention. State Intervention in Business. 511—517

CHAPTER XLIV—PUBLIC FINANCE

Public Finance and Its Importance. Distinction between Public Finance and Private Finance. Public Expenditure. Principles of Public Expenditure. Classification of Public Expenditure. Effects of Public Expenditure on Production. Effects of Public Expenditure on Distribution. 518—527

CHAPTER XLV—PUBLIC FINANCE—(*Contd.*)

Public Revenue. Classification of Public Revenue. Tax, Fee, Rates, etc. Classification of Taxes. Canons of Taxation. Characteristics of a Good Tax System. The Indian Tax System. The Problem of Justice in Taxation. Some other Theories of Taxation. Proportional *Vs.* Progressive Taxation. Taxable Capacity. Feasibility of a Single Tax. Local Taxation. 528—551

CHAPTER XLVI—INCIDENCE OF TAXATION

Incidence and its importance Direct and Indirect Taxes. Relative Merits and Demerits of Direct and Indirect Taxes. The Diffusion Theory of Taxation. Commodity Tax. Tax on Monopoly. Tax on Buildings, Property Tax. The Incidence of Rates. Death Duty. Incidence of Taxes on Income. Tax on Interest. Tax on Profits. Excess Profits Tax. Tax on Wages. Incidence of Social Insurance. Taxation of Surplus. Incidence of Sales Tax. Profession Tax or Haisiyat Tax. Tax Differentiation. 552—568

CHAPTER XLVII—PUBLIC DEBT

Introduction. The Benefits and the Dangers of Public Credit. Funds for Emergencies. Temporary *Vs.* Permanent Loans. Limit to National Borrowing. Public Funds Through Note Issue. Debt Redemption or Repayment. Capital Levy. Burden of Public Debt. War Finance. The Cost of War. 569—584

CHAPTER XLVIII—DEFICIT FINANCING

Introduction. Deficit financing and Economic Development. Deficit financing and Inflation. Minimising Inflationary Potential of Deficit Financing. Scope and Limitations of Deficit Financing. 585—590

CHAPTER XLIX—ECONOMIC SYSTEMS

Capitalism ? Outstanding Features of Capitalism. Achievements of Capitalism. Criticism of Capitalism. Planned Economy. Socialism. Marxian Socialism or Scientific Socialism. Collectivism or State Socialism. Guild Socialism. Syndicalism. Communism. Anarchism. Fabian Socialists. The Essentials of a Socialist Scheme. Case against Socialism. Answer to the Critics of Socialism. Progress of Socialism. The Russian Experiment. Economic Problems in a Socialist State. Welfare State. 591—614

Appendix. Guide to the Study of Economic Theory 615—617

Typical Questions : 618—643

Index 644—652

MODERN ECONOMIC THEORY

CHAPTER I

THE NATURE AND SCOPE OF ECONOMICS

1. The Problem of Definition. Dr. J.N. Keynes is not far wrong when he remarks that "Political Economy is said to have strangled itself with definitions."[1] There are, therefore, economists like Richard Jones and Comte who would do away with the definition altogether. But it is very essential for a student to have some definition in mind as a working basis. Besides, the discussion leading to a definition is very useful in giving clarity to the fundamental concept of the subject. Let us, therefore, examine some of the definitions put forward from time to time.

2. Is Economics a Science of Wealth? According to Adam Smith, Economics was concerned with "An Enquiry into the Nature and Causes of Wealth of Nations." The early economists called Economics the Science of Wealth. At a time when religious sentiment was strong and spiritual values held sway over men's minds, the idea of wealth, because of the pampered and degenerating ways of the rich, could only excite repulsion in the enlightened mind. It called forth righteous indignation from men of letters like Carlyle and Ruskin. The early economists, the votaries of the new cult of Mammon worship, were, therefore, looked down upon. Economics was considered to teach selfishness and came to be called a "dismal science."

Luckily Economics has now been extricated from this unenviable position. Exaggerated emphasis on wealth is gone. No undue importance is now attached to wealth as such. It is now fully recognised that wealth is only a means to an end, the end being human welfare. Wealth cannot be the be-all and the end-all of human endeavour, nor can it be expected to be the sole cause contributing to human happiness. *The emphasis has now shifted from wealth to man.* Man occupies a primary and wealth only a secondary place. As Marshall rightly puts it, *Economics is "on the one side a study of wealth; and on the other, and more important side, a part of the study of man."*[2] Economics thus is not a science of wealth but a science of man *primarily*. It may be called the science of human welfare.

Recently, Robbins has completely freed Economics from the accusations of its detractors who called it sordid or mean. According to Robbins, Economics is not concerned with ends as such. The ends may be noble or ignoble. If their achievement involves the use of scarce resources they have an economic aspect. Thus Economics embraces all conduct, good or bad, provided it comes under the influence of scarcity. Hence we can no longer blame Economics for occupying itself with bad or ignoble aims.[1]

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[1] Keynes, J.N.—*Scope and Method of Political Economy* (1930), p. 153.

[2] Marshall, A.—*Principles of Economics* (6th Ed.), p. 1.

3. Economics as a Science of Material Walfare. For a long time, the accepted view has been that Economics is concerned with those human activities which centre round wealth not for its own sake, but for the sake of material welfare that it promotes. The following definitions represent this traditional view :

"Economics is the study of the general methods by which men co-operate to meet their *material* needs". (Beveridge).

"The aim of Political Economy is the explanation of the general causes on which the *material welfare* of human beings depends". (Cannan).

"The range of our inquiry becomes restricted to that part of social *welfare* that can be brought directly or indirectly into relation with the *measuring rod of money*". (Pigou).

"Political Economy, or Economics, is a study of mankind in the ordinary business of life ; it examines that part of individual and social action which is most closely connected with the attainment and with the use of the *material requisites of well-being*" (Marshall).[2]

We can see that one thread seems to run through the definitions given above, *viz.*, that of material welfare. Beveridge speaks of meeting "material needs," Cannan of "causes of material welfare" and Marshall of "material requisites of well-being." According to these economists, the aim of Economics is to study those human activities which are conducive to human welfare in its material aspect.

Why have the economists concerned themselves with material welfare ? Human welfare in all its aspects is immeasurable. But economists have with them an instrument by means of which material aspects of human welfare can be measured. This instrument is wealth. It furnishes man with material means of satisfying his wants and of promoting his welfare. Economists, in so far as they study wealth, can be legitimately regarded as studying causes of material welfare.

But Lionel Robbins has led a frontal attack on this position. He does not think it right for the economists to confine their attention to the study of *material* welfare. In the actual study of economic principles both the "material" and "immaterial" are mixed up. "A theory of wages which ignored all those sums which were paid for 'immaterial' services or spent on 'immaterial' ends would be intolerable."[3] The economists have also adopted unanimously a "non-material" definition of productivity. In his book *Nature and Significance of Economic Science*, Robbins has given numerous examples of goods which are highly conducive to human welfare but which have nothing material in them, *e.g.*, services of doctors, lawyers, etc. These services have economic significance. They are scarce and have value. "It is not the *materiality* of even material means of gratification," says Robbins, "which gives them their status as economic goods ; it is their relation to valuations." The "materialist" definition is based on exploded physiocratic notions. Economics is thus concerned with both material as well as non-material things.

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[1] Robbins, L.—*Nature and Significance of Economic Science* (1945), p. 27.

[2] Marshall, A.—*Principles of Economics* (1945), p. 1.

[3] *Ibid.*, p. 6.

Robbins's objection is, however, not merely to the word "material". He would not have Economics to do anything with welfare at all. The anomalous position of those who study Economics in terms of welfare is evident. Intoxicants are regarded as wealth, but by no stretch of imagination can they be regarded as conducive to human welfare. Being scarce they are subject to the "pricing process". They have, in short, economic significance, though human welfare is not served by them. Robbins would say, "Why talk of welfare at all ? Why not throw away the mask altogether ?"

Apart from the anomalies into which the welfare economists fall, there are other reasons for discarding the welfare idea from discussions which are strictly economic. Ideas of welfare vary from age to age, from country to country, and from individual to individual. Welfare is too vague and indefinite an idea to provide an adequate ground for building up a respectable science.

There is the further objection that, in assessing human welfare, we shall be called upon to give our verdict as to what we regard as conducive to human welfare and what is not so conducive. We shall be transported to the world of Ethics, whereas Economics, according to Robbins, is neutral as regards ends. It is not supposed to be its function to pass moral judgments, and say what is good and what is bad.

Thus Economics is not to be regarded as a study of the causes of material welfare. "Whatever Economics is concerned with, it is not concerned with the causes of material welfare as such." (Robbins).

4. **Robbins's Definition**. Marshall seemed to have settled the matter of the definition of Economics long ago and a large consensus of expert opinion had been mobilised behind him. But the publication of Robbins's book, *Nature and Significance of Economic Science*, in 1931, set the ball of controversy rolling once again.

Lionel Robbins has challenged the traditional view of the nature of Economic Science. We have noticed some of his objections in the above section. He calls the hitherto accepted and well-known definitions of Economics classificatory and unscientific. The word "material" imposed unnecessary limitation. The welfare conception of Economics lacked universality and scientific precision. Robbins claims that his definition does not suffer from any of these defects.

According to Robbins, "*Economics is the Science which studies human behaviour as a relationship between ends and scarce means which have alternative uses.*" On analysis we shall find that this definition lays down the following three fundamental propositions which constitute the basis of the structure of Economic Science :—

(*a*) "Ends" refer to wants. Human beings have wants which are unlimited in number. Multiplicity of wants calls forth ceaseless effort for their satisfaction, and the unending cycle of economic activity moves on. If wants had been limited, they would have been adequately satisfied and incentive to economic effort would have ceased. Since human wants are unlimited, one is compelled to choose between more urgent and less urgent wants.

(*b*) Although wants are unlimited, yet the means to satisfy them are strictly limited. No doubt, there are certain free goods which also satisfy human wants. Yet most of the things that we want are scarce. Had the means been unlimited, no economic problem would have arisen. But as it is, the resources at the disposal of a community are scarce, and they must, therefore, be economised.

The term "scarcity" is used here in a special sense. It is scarcity in relation to requirements. Scarcity is not to be taken in an absolute sense. A commodity may exist in a small quantity ; but if nobody has any use for it, we shall not call it scarce in the economic sense. Thus rotten eggs, though much fewer than good ones, are not scarce in the economic sense. On the other hand, there may be huge stocks of a commodity like wheat or coal in the world, yet it will be called scarce because the demand is even larger than the supply. It is the demand in relation to supply for a commodity, and not its quantity alone, which will determine whether a commodity is scarce or not. Scarcity is a relative term.

(*c*) The third proposition underlying Robbins's definition is that the scarce means are capable of alternative uses. If a commodity could be put only to one use and to none else, few economic problems would arise in its connection. After it has met that use, it will become a free good and will have no economic significance. Actually, however, the uses to which a commodity can be put are numerous, almost unlimited. Hence the demand in the aggregate for that commodity is almost insatiable. Further, these alternative uses are of varying importance, so that we can select the use to which a commodity may be put.

Unless all these conditions are present no economic problem will arise. Multiplicity of ends *alone* or the scarcity of means *alone* cannot create an economic problem nor merely the alternative applicability of scarce means. "But when time and means for achieving ends are limited *and* capable of alternative application, *and* the ends are capable of being distinguished in order of importance, then behaviour necessarily assumes the form of choice,"[1] *i.e.*, it has an economic aspect.

In the Robbinsian sense, economic action lies in man's utilisation of scarce means for the satisfaction of multiple ends. The "means" refer to time, money or any other form of property. They are all limited.

In each case, we try to make the best use of our limited resources. From the point of view of the State, Economics may be defined as the "study of those principles on which the resources of a community should be so regulated and administered as to secure the communal ends without waste." (Wicksteed). In Stigler's words,

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[1] Robbins, L.—*Nature and Significance of Economic Science* (1945), p. 14.

"Economics is the study of the principles governing the allocation of scarce means among competing ends when the objective of allocation is to maximise the attainment of the ends."[1]

Robbins has thus demolished the old structure of Economics based on material welfare and raised a new one with two foundation-stones, *viz.*, multiplicity of wants and scarcity of means.

This definition, Robbins claims, is superior to the earlier definitions. It is more scientific ; it transcends the narrow boundaries within which the materialist definition confined Economics. It lays down a maxim which is true of all times and places. As Wicksteed puts it, "Its laws are like the laws of life and are applicable to fields that have no connection whatsoever with the business or production of wealth."

When Economics is so defined, no charge of sordidness or preaching of Mammonism can be levelled against it. It can no longer be called a "dismal" science. It takes no responsibility for selecting the ends. They may be good or bad, Economics is not concerned. Wherever the ends are many and the means are scarce, Economics is directly concerned.

But Robbins is not without his critics. The Marshallian spirit is not dead. Economists like Durbin, Fraser, Wootton and Beveridge, have put up a strong defence of Marshallian Economics. Wootton urges "that it is very difficult for economists to divest their discussions completely of all normative significance." Fraser says, "Economics is more than a value theory or equilibrium analysis." Robbins's idea of Economics, though admittedly more scientific is colourless, impersonal, neutral as regards ends. He says, "Equilibrium is just an equilibrium."

Robbins, it is said, has reduced Economics merely to valuation theory. Other aspects of the study of Economics have been relegated to the background. Robbins's definition does not circumscribe an aggregate already in existence, but it leaves outside the city wall a part of the city already existing.[2]

In Robbins's definition the human touch is entirely missing. It is well to emphasize with Ely that "Economics is something more than a science, a science shot through with the infinite variety of human life, calling not only for systematic thinking but for human sympathy, imagination and in an unusual degree for the saving grace of common sense."[3]

There is no doubt that Robbins has made Economics more abstract and complex and hence difficult. This detracts from its utility for the common man. Utility of Economics lies, in a large measure, in its being a concrete and realistic study.

5. Scope of Economics. Controversy has centred not only round the definition of Economics but also its scope. In discussing the scope of Economics, we are chiefly concerned with the questions

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[1] Stigler, G. J.—*Theory of Price* (1947), p. 12.

[2] A paper read by M.H. Gopal at the Indian Economic Conference held in 1940.

[3] Ely and others—*Outline of Economics* (1930), p. 4.

relating to the subject-matter. Does it study man as an isolated individual, or as a member of society? Can it solve practical problems ? Is it a positive or normative science ?

Subject-matter

We have already discussed the subject-matter in the definition itself. We may repeat that all human activities which have reference to wealth, or all those phenomena which "can be brought directly or indirectly into relation with the measuring rod of money" are the concern of Economics. Robbins would have Economics to deal with human behaviour relating to the disposal of scarce means which have alternative uses for the satisfaction of unlimited ends. This, of necessity, involves choice and valuation. It is, therefore, said that valuation, in all its forms, is the central problem of Economics.

The subject of Economics is indeed very wide. It analyses human wants and lays down the laws governing their satisfaction. It studies the efforts of the four agents of production when engaged in the production of wealth and the conditions of their efficiencey. It then proceeds to discuss how the forces of demand and supply react upon one another, and further how wealth is distributed in the community among the various agents of production. Mechanism of exchange based on the monetary and banking systems, as well as the problems of international trade, foreign exchange and public finance also form an important part of its study.

A Social Science

Economics is primarily a study of man and not of wealth. But *it does not study man as an isolated individual* who has renounced the world. It studies, on the other hand, men who live in society affecting society by their actions and themselves exposed to social influences. Economics is not so much concerned with "the *economic man*"—an abstraction—but the man of flesh and blood swayed by ordinary motives, noble or ignoble, and having his ordinary share of human virtues and vices. But Economics is not a social science in the sense that it studies social acts as distinguished from the acts of the individuals.

Can it Solve Practical Problems ?

The English economists generally hold that it is not the function of Economics to solve practical problems. Although the economic aspect of these problems may be very important and the economist's opinion is of very great value, yet no problem can be solved on economic grounds alone, for political and moral considerations may also be involved. "*The theory of Economics does not furnish a body of settled conclusions immediately applicable to policy. It is a method rather than a doctrine, an apparatus of the mind, a technique of thinking which helps its possessor to draw correct conclusions.*" (Keynes).

We do not quite agree with this view. No economist has lived up to this ideal. Adam Smith, Ricardo, Malthus and, in our times, the late Lord Keynes himself, have all actively interested themselves in the problems of their time. In the words of Fraser, "*An economist who is only an economist is a poor pretty fish.*" According to Tugwell, it is only a premature flowering of Economics, which is responsible for its separation from practical life. Wootton complains that "we spend too much time forging theoretical tools and too little time in trying to make practical use of them." It is, therefore, increasingly felt that the economist must tackle practical problems. When we study Economics, "*our impulse is not the philosopher's impulse, knowledge for the sake of knowledge but rather the physiologist's, knowlegde for the healing that knowledge may help to bring.*" (Pigou).

Our view, therefore, is that the economist must lend a helping hand in the solution of the practical problems. And he is in a much better position to do so than the statesman who may be devoid of the knowledge of economic theory. Every day the economists are being called upon to give advice on practical problems. To quote Pigou again, "Economics is chiefly valuable neither as an intellectual gymnastic, nor as a means of winning truth for its own sake, but as a handmaid of Ethics and a servant of practice."

Is it a Positive or a Normative Science ?

A positive science only explains *what is* and a normative science tells us *what ought to be i.e.*, right or wrong of a thing. We have to consider whether Economics can pass moral judgments or simply explain the "why" of things. The English Classical School was of the view that it was none of the functions of the economist to comment on the rightness or wrongness of an economic situation. Senior thought that the economist could not add even one word of advice. Cairnes said that Political Economy stood neutral as regards ends as mechanics stands neutral between rival schemes of railway construction. In recent times, Robbins has reaffirmed this neutrality. According to him Economics is not concerned with the desirability or otherwise of the "ends." "The role of the economist is more and more conceived of as that of the expert who can say what consequences are likely to follow certain actions but who cannot judge as an economist the desirability of these actions." It is said that the *function of the economist is to explore and explain and not to advocate and condemn.* This, in our opinion, is not the right view.

We agree with Hawtrey that Economics cannot be dissociated from Ethics. There is an "economic ought." Having analysed, for example, the causes of the maldistribution of wealth, why should the economist fight shy of saying that it ought to be better distributed ? "A non-psychological Economics must, therefore, be regarded as either a superficial figment or as positively non-scientific. It is *Hamlet* with Hamlet left out."[1] Economics, therefore, is both a positive and a normative science. We do not agree with Robbins when he says that the gulf between positive Economics and Normative Economics is so wide that no human ingenuity can bridge. It is the function of a sound economist to bridge this gulf. Even when the ends are given, Economics can pronounce on the means that ought to be adopted to achieve those ends.

The position is very well summed up by Cairncross thus : "However reluctant economists may be to introduce the brittle thread of ethics (so often snapped by disagreement) into their analysis, they cannot offer the guidance which is so urgently sought of them unless they do. They can explain how the economic system works without putting the mantle of philosophy over the rather drab working clothes of economic science. But they cannot say how the system can be made to work *better*. They can *offer* light, but not fruit ; and it is fruit for which most people turn to Economics. Immediately the economist does venture to offer counsel—as is expected of him—he appears in the role of sheep in wolf's clothing, economist turned philosopher. This is a role which he must play consciously—not sheepishly, as if there were no wolf's clothing there ! —if his conclusions are to command attention and respect."[1]

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[1] Wolfe in Tugwell's *Trends of Economics* (1935), p. 466.

Ends and Means

It has been remarked that Economics is concerned with means and the ends lie outside its scope. It simply means that in the fixing of ends or objectives, Economics has no share. It is for the Government or the individuals to determine what they want to have or want to do. When they have settled it, the economist will come in and suggest how best to achieve those ends with the minimum expenditure of resources. The economist will simply recommend the most economical use of the means for the realisation of particular ends. Economics takes ends as given in scales of relative valuation. It can only comment on the utilisation of means for the achievement of these ends. It is in this sense that ends lie outside its scope.

It follows, therefore, that the economist takes no responsibility about the nature of the ends. The ends may be noble or ignoble, the economist is not concerned. Hence there is no such thing as economic ends. "In so far as the achievement of *any* end is dependent on scarce means, it is germane to the preoccupations of the Economist."[2] However, we have made it clear in the preceding paragraph that the economist cannot altogether avoid pronouncing moral judgments.

It is clear that in the discussion of the scope of Economics, we have to tackle a number of controversial questions relating to the nature of Economic Science saying what it is and what it is not, what it does and what it does not do.

6. Relation of Economics to other Sciences. Having studied the nature of Economic Science, we are now in a position to examine its relation with other sciences. Human nature is indivisible. The economic aspect of human problems cannot, therefore, be separated from other aspects—legal, political, etc. Economics is thus intimately connected with other sciences. It freely draws on every other science, especially History, Mathematics, Statistics, Physical Sciences, Psychology, etc. Economics, however, does not seek to establish or explain the laws of physical sciences ; it simply uses them as bases for its own reasoning.

Of Psychology, Economics has made much use. The Law of Choice, which is the most fundamental law of Economics, has a psychological basis. Mill described Political Economy as "a moral or psychological science." Jevons made it even more psychological. To him the theory of Economics was "the mechanism of utility and self-interest," and "entirely based on a calculus of pleasure and pain."

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[1] Cairncross, A.—*Introduction to Economics* (1944), p. 9.
[2] Robbins, L.—*Nature and Significance of Economic Science* (1945), p. 24.

The relation of Economics to the social sciences is very intimate indeed. Philosophers like Comte would subordinate Economics to, and include it in, Sociology—the general science of society. But Sociology still awaits development, whereas Economics has attained an advanced degree of maturity. As such it is capable of being studied separately. This specialisation is highly conducive to scientific thoroughness although it is wrong to think of it as an entirely independent science. Complete segregation between Economics and Sociology is out of the question.

Economics is very closely connected with Ethics, for all economic activities must be coloured by ethical considerations. When we discuss production and distribution, we must keep moral ideas steadily in view. Economic activities must be conducted on a moral plane. The early economic thinkers completlely subordinated Economics to Ethics. She was "not merely attendant and the handmaid of Ethics ; she was crushed and blotted out by her more prosperous and pampered sister."

We have already discussed the influence of Ethics on Economics while considering whether Economics is a positive or a normative Science. (*See* Sec. 5.) Ethics is the study of values. It discusses the desirability or otherwise of the ends to the attainment of which scarce resources are to be allocated. But many modern economists are of the view that Economics is not concerned with the questions of right or wrong or good or bad. To do this is the job of a philosopher. At the most, an economist can say that the use of certain resources is not appropriate to the end in view.

Economics must take notice also of Jurisprudence, the science of law. Economic activities must be carried on within a legal framework. The economist cannot favour illegal activities, however, lucrative they may be. The system of law limits and determines our economic activity.

Economics and History, again, are closely allied. Economics studies the relationship between ends and means, and its various implications. Economic History studies the manifestations of these relationships from time to time. History furnishes the necessary background against which we can have a better appreciation of economic theories and problems. By means of history, we are able to confirm or disprove old theories and discover new ones. The discovery of gold mines threw a new light on the quantity theory of money and the occurrence of Black Death threw in bold relief the demand and the supply side of labour. Similarly, History has largely contributed to the formulation of theories of trade cycles.

But, whereas Economics owes a debt to History, knowledge of economic theory, too, is of immense value to the historian. As a matter of fact, a history which omits an analysis of economic conditions is an incomplete history, if not a misleading one. It has been well remarked :

> • "Economics without History has no root,
> History without Economics has no fruit."

Of all the sciences, relation of Economics with Political Science is the closest. It is now increasingly recognised that Economics is more and more becoming Political Economy. The implication is that it is becoming more and more mixed up with Politics. To the statesman, economic considerations are the most important. He must take into consideration the economic conditions and institutions before embarking on certain political policy. Economic considerations are paramount in determining political policies.

In the same way, political conditions and institutions have a far-reaching influence on the economic conditions of country. Few can deny that economic development in India has been very largely influenced by the political factor. Politics and Economics thus act and react upon each other.

All current political problems are predominantly economic in character. Most wars in modern times are the outcome of scramble for markets and materials. The communal problem in our country has been essentially an economic problem. It arises from a desire to further the economic interests of the community. The setting up of economic advisory councils or the "Brains Trusts" to advise the governments shows that Economics is becoming more and more a handmaid of Politics. That is why it has been remarked that Economics is becoming more and more Political Economy.

There is a new science on the borderland of Economics and Mathematics, *viz.*, Statistics. Economits is increasingly making use of Statistics which is popularly known as a science of facts and figures. No economic discussion is complete unless it is supported by relevant statistics ; and no economic problem can be satisfactorily solved unless relevant and up-to-date statistics are available. This is illustrated by the Indian food problem. Without accurate statistics, an economic policy is simply a leap in the dark.

Statistics may confirm economic theories or compel a re-examination of them, if a theory runs counter to facts and figures. It is also possible that the statistical information may be incomplete or inaccurate if it does not support a well-established theory. Thus statistics are of invaluable aid to the economic theorist.

As Colin Clark observes, "It would be laughable, were it not tragic, to watch the stream of books and articles attempting to solve exceptionally complex problems of present-day economics by theoretical arguments, often without even a single reference to the observed facts of the situation." Again "Theory has a valuable, indeed an essential, part to play in the development of economic science. But it must be theory which respects facts, not tries to supersede them."[1]

7. Laws of Economics. Like every other science, Economics, too, has drawn its own set of generalizations, which are called the laws of Economics. These laws are supposed to govern and explain all economic activity. In the words of Marshall, economic laws may be defined thus :—

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[1] Quoted by Stigler in his *Theory of Price* (1957), p. 18.

"*Economic laws, or statements of economic tendencies, are those social laws which relate to branches of conduct in which the strength of the motives chiefly concerned can be measured by money price.*" In terms of Robbins's definition of economic activity, we might say that economic laws are statements of uniformities which govern human behaviour concerning the utilisation of limited resources for the attainment of unlimited ends. These, in short, are the principles according to which we act when engaged in our ordinary business of life or in an economic activity.

But what is the nature of these laws ? What are they like ? Are they like the government laws, or like the laws of morality or like the laws of natural sciences ? The laws of the government are coercive ; there is a penalty attached to their breach. The laws of morality are not so obligatory ; they merely indicate how we should act in order to satisfy public opinion or our conscience. The laws of natural sciences can be stated with precision and have a universal validity. Economic laws are unlike all these. The nature of economic law is not indicated by the word "must," as in the case of statute law, or by "ought", as in the case of moral law ; but their nature is indicated by the phrase, "other things being equal" (*ceteris paribus*).

Some economic laws are axiomatic in character, *e.g.*, greater gain is preferred to smaller gain. There are other economic laws which are of the nature of physical laws, *e.g.*, the law of diminishing returns. But most of the economic laws are hypothetical. They hold good under certain conditions. Given certain conditions certain results will follow. The material of Economics is complex and ever-shifting. There is a great deal of economic friction arising out of custom and law. Social disabilities and legal restrictions thwart the operation of an economic law. There is also a preponderance of the human element. All these factors impart an element of uncertainty to economic laws. They lack the definiteness and exactitude found in laws of sciences like Physics. It is for this reason that *Marshall has compared economic laws to the laws of tides rather than to the simple laws of gravitation.*

It should, however, be remembered that the laws of Economics are more exact than those of any other social science, because the economic phenomena are capable of being measured in money price. This measuring rod of money is not available to any other social science like History and Political Science.

Economic laws are inevitable and inescapable if the necessary assumptions are fulfilled. But these assumptions are not always fulfilled. Hence economic laws lack predictability. "There is no convenient yardstick by which to measure the currents in business affairs, for these are subject to gusts of fear or perhaps of fantastic optimism as unpredictable as earthquakes."[1] We cannot, therefore, say what will happen next, because it depends on the fulfilment of so many conditions. We can only say what is *likely* to happen. Economic laws are, therefore, *merely statements of tendencies* or of statistical probabilities.

One controversial point about economic laws is about their applicability. The Classical Economists were of the opinion that eco-

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1. **Moore and others—*Modern Economics* (1940), p. 3.**

nomic laws were immutable, eternal, inexorable and so universally applicable, without any qualification whatsoever. The Historical School, on the other hand, emphasized their relativity and insisted that they had only a limited application to a given environment. Bagehot, for example, declared that the laws of Economics propounded in England were applicable to "a grown-up society of competitive commerece."

Modern economic opinion inclines to the view that inasmuch as economic laws are based on essentials of human nature they hold good of almost all communities. But in the formulation of actual economic policies allowance must be made for varying local conditions. Who can doubt that Gresham's law, the quantity theory of money, the law of diminishing utility, the law of choice and host of other economic laws are independent of sociological and political conditions ? Given the conditions under which they are true, the conclusions to which they point are inescapable. "If the data they postulate are given, then the consequences they predict necessarily follow."[1] To say that economic laws are historico-relative and that they have no relevance outside certain historical conditions is wrong. The fact is that they are based on very wide human experience and have almost a universal applicability.

8. Economic Assumptions. It is seen above that the economic laws are governed by the phrase "other things being equal." This means that, while reasoning out economic phenomena, we take certain things for granted. These are the various assumptions that underlie economic reasoning.

There are three broad types of these assumptions. The first group relates to the behaviour of individuals. *e.g.*, consumers, producers, workers, etc. For instance, we assume that the consumers act in a rational manner, that there is mobility of labour in search of higher wages and the *entrepreneurs* seek maximum profit. Actually it may not be so. But, in order to simplify things, we have to assume all these things. The second group relates to the social, economic and political institutions. For example, we assume the existence of private property and capitalistic order of society. We assume law and order and stable political system. The existence of markets is also assumed. Finally, there is a category of assumptions that relates to facts of geography and biology. We must base our conclusions on what is physically or climatically possible. The most fundamental of these assumptions is that goods are scarce.

9. Is Economics a Science ? "Whenever six economists are gathered," says Wootton, "there are seven opinions."[2] In view of absence of unanimity among economists, the claim of Economics to be regarded as a science has been challenged. Wootton says again, "Economists are under the suspicion of being charlatans and they cannot afford to arrogate honourable titles to themselves.........In the increasingly common application by theoretical economists of the term science to their studies, there is an element of wishfulment." Further, "The zealous student of Economic Science would do well from time to time to remind himself that of all the demand and supply schedules, cost curves or indifference curves that give so formidable appearance to his text-books, not one (unless by accident) is founded upon fact............The reader would search far and wide through the works of analytical economists before he came upon a single prediction endorsed by the weight of authoritative opinion of the course of events to be anticipated in any concrete historical situation.''[1] How can, then, Economics be called a Science ?

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[1] Robbins, L.—*Nature and Significance of Economic Science* (1945), p. 121.

[2] Wooton—*Lament for Economics* (1938), p. 14.

It is further pointed out that men being endowed with a freedom of will, economic phenomena are highly complex, varied and variable. It is difficult, nay impossible, to build up a science on such a slender foundation. The claim of Economics to be called a science seems to have been, therefore, completely demolished. But it not so.

Whether a particular branch of learning is entitled to be regarded a science or not, depends on what we consider a science to be. If we expect a science to formulate laws applicable everywhere and to all times, and if we expect it to predict the future course of events, then, frankly speaking, Economics is not a science. But, these requisites of a science do not accord with the modern notion as to what a science is. By science we understand a systematized body of knowledge. It is not merely a collection of facts. But the facts are so arranged that they speak for themselves. Only when laws have been formulated does a branch of knowledge become a science. In the words of Poincare, "Science is built up of facts as a house is built up of stones ; but an accumulation of facts is no more a science than a heap of stones is a house."

Judged by this standard, Economics is certainly a science. The economist has collected his facts. The facts have been carefully analysed and put under suitable classification, and general principles governing these facts have been discovered and enunciated. What more is needed to make Economics a science ?

It is now fully agreed that Economics is a full-fledged science. In fact it is in no way less than other sciences. "Economic Laws are on all fours with the propositions of all other sciences.[2]

But it is necessary to understand the true nature of Economics. The paradox of Economics is that it is a science and yet it cannot predict future course of events as the natural sciences like Physics and Chemistry can. Man is endowed with a freedom of will. Prediction in human behaviour is thus an impossibility. To quote Durbin, "Certainty will always escape us, and prediction miss the mark....... Just because men can learn from experience they can learn from Economics itself, and so the subject destroys its own conclusions by its own discoveries.''[3] Economics thus presents a "continually changing body of doctrine."

10. Is Economics also an Art ? It has been settled that Economics is a science, but can it be treated also as an art ? The English economists are of the view that Economics is only a science and not an art. "The type of science that the economists will endeavour to develop must be one adapted to form the basis of an art. It will not, indeed, itself be an art." "It is a science pure and applied, rather than a science and an art" (Marshall).

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[1] Wooton, *op. cit.*, pp. 111-18.

[2] Robbins, *op. cit.*, p. 104.

[3] *Economics, Man, and His Material Resources* (New Education Library), pp. 333-34.

The argument advanced in favour of this attitude is that it is only in this way that the theoretical Economics can attain any degree of scientific thoroughness. The extraneous considerations of making it into an art will only hamper its work ; also, that it would make it a very imperfect art. The function of Economics is simply to "explore and explain" and not to lay down formulae and precepts for the attainment of particular ends.

We, however, do not agree with this view. Every "art" has a theoretical or a scientific side and so every science has an "art" or the practical side. Our view is that the "art" side in Economics is very important. If Economics is made into an abstract science as it is increasingly becoming, it will become all the more unintelligible to the lay public ; it will be shorn of its practical utility. In our opinion, Economics is a science both light-giving and fruit-bearing. Even those who regard it as a pure science make room for another branch of Economics, *viz.*, Applied Economics.

11. Methods of the Science of Economics. One of the grounds on which Economics has been recognised to be a science is that like other sciences, it, too, uses scientific methods. Let us now see what these methods are.

The early English economists, known as the Classical School, tried to build up the science of Economics from a few simple generalizations. The method that they used is called the Deductive, Analytical, Abstract or *a priori* method. Among these may be mentioned Senior, Mill, Cairnes and Ricardo, the last one being the chief exponent. The advocates of this method start with a few indisputable facts about human nature and draw inferences about concrete individual cases. For example, they believe that self-interest alone guides men in their daily life, and they try to explain and predict all human behaviour in terms of self-interest, which is obviously wrong.

This method has the merit of being simple, effective and certain only if the assumptions are valid. This is a very big "IF" indeed. More often than not, the assumptions turn out to be untrue or only partially true. They make Economic Science dogmatic for they refuse to admit that there can be some flaw in their premises. The Deductive Method proves particularly dangerous when universal validity is claimed for generalizations based on imperfect or incorrect assumptions, and when attempts are made to formulate practical policies of the nation in the light of these generalizations.

The Historical School represents a reaction against this attitude. The reaction was specially marked in Germany and was represented by economists like Roscher, Hildebrand and Frederick List. The new movement had also its supporters, like Cliff Leslie, in England. They advocated a method which has come to be known as Historical, Inductive or Realistic. This method insists on the examination of facts and then laying down general principles. Hence we go up to "generals" from "particulars" whereas in the Deductive Method we come down from "generals" to "particulars".

The main weapons in the hands of the inductive economists are observation and experiment. This method has the merit of being based on facts and having, therefore, a surer foundation. But the danger is that hurried conclusions may be drawn from insufficient number of facts. Some important facts may have been ignored, and the conclusions may be unwarranted. To use Colin Clark's words, it will be "effectively putting the theoretical cart before the factual horse." Besides, observation and experimentation have very limited application in a science which deals with human activities.

But as against this it may be pointed out that although conscious experimentation is out of the question in economic science, yet history affords a number of experiments in the form of economic measures adopted from time to time. The granting of discriminating protection in India was one big experiment. In modern times, the application of the inductive method has been very much extended. There is a spate of statistical publications in every country. The "blue books" are full of facts and figures and the economist has a large and reliable supply of the material from which to draw his conclusions. The modern era has been called the Inductive Era.

The modern economist, however, does not rely on one method to the exclusion of the other. He uses both. "*Induction and Deduction are both needed for scientific thought as the right and left foot are both needed for walking*"[1] The economist first starts tentatively with a certain hypothesis based on deductive reasoning and then tests it on the touchstone of facts, and the hypothesis is elevated to the plane of a theory. Further checking in the light of the prevailing situation has to be done before the theory can be changed into a law. There is thus, what Eric Roll calls "interpenetration of deduction and induction."

Thus "*the true solution of the contest about method is not to be found in the selection of deduction or induction but in the acceptance of deduction and induction.*" (Wagner). Which of the two methods is to be used on a particular occasion depends on the nature of the inquiry, the material in hand and the stage at which the inquiry has reached. The true scientific method consists of three different stages, *viz.*, observation, the use of imagination and reason, and finally the verification of theories.

12. Value of the Study of Economics. The economist can legitimately be proud of the fact that, in a way, his science is decidedly more useful than any other branch of learning. No other science makes human welfare its direct and primary concern. The economist, in his own humble way, tries his best to contribute to human welfare.

Economics has great *intellectual value*. Those who devote their time to the analysis and understanding of economic problems are amply rewarded with the sharpening of intellect. The study of the various theories of values, of wages and interests, the unravelling of the mysteries of foreign exchange, and the attempt to understand intricate currency and financial problems provide an excellent mental gymnastics. It disciplines people in sustained thinking.

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[1] Quoted by Marshall.

There is also the *cultural value* of the study of Economics. The student of Economics is initiated into the mysteries of the working of the economic machine. He comes to understand how automatically it goes on working without apparent jolts, and without any presiding genius to direct it. Every individual is a worker in this vast and complex productive system. He has also his own contribution to make to the cumulative result. This teaches him the lesson of economic interdependence. It gives him a sense of pride, a sense of responsibility and better appreciation of the scheme of things. This is no small gain. In any scheme of mental culture, Economics must form an indispensable element.

The *practical importance or vocational value* of Economics is also very great. To the statesman, the knowledge of Economics gives a better grasp of the political problems that face him. For the finance official, a knowledge of Economics is indispensable. To the labour leader, it is helpful in understanding the industrial situation. It enables him to fight the battle of labour against capital more effectively. He will know when to press his demands strongly, and when to yield gracefully.

Economics is the strongest ally of the businessman. He can learn the principles of business organisation. He will be able to plan his business well and tackle the problems of production and marketing more successfully. To the businessman, it thus renders direct assistance. The breadth of vision which the study of Economics necessarily gives, stands him in good stead in times of difficulty. It is really difficult to think of any aspect of human life, with its multitudinous activities, where the knowledge of Economics is not useful. "You cannot," says Wootton, "be in any real sense a citizen unless you are also in some degree an economist."

From the increasing votaries of Economic science and the embarrassingly large number of students it attracts, we can say in Durbin's words, "Economics is the intellectual religion of the day."

Whatever the stage of economic evolution, economic considerations have weighed with man the most. Even a Robinson Crusoe is faced with the fact of scarcity of means and multiplicity of wants. A Socialist State too cannot do without Economics. Whether in peace or in war, Economics proves the most potent ally of man.

Thus looked at from every point of view, Economics is an extremely useful and important subject. Its importance overshadows that of any other subject. The results achieved by other sciences have in the end to be put to commercial uses. Herein comes the importance of Economics. It is the economic organisation which ultimately harnesses into the service of mankind what other sciences have to give.

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CHAPTER II

ECONOMIC TERMS AND BASIC CONCEPTS

1. **Introduction.** In the first chapter, we made a preliminary and rapid survey of the nature of Economics. Before we begin a detailed study of the subject, it is necessary to fix in our mind the precise meaning in which we shall frequently use certain terms and concepts.

The term "good" or "goods" is used in Economics in the sense of *anything which is capable of satisfying a human want.* Goods may be classified as under :—

(1) *Free Goods, e.g.*, air, sunshine, etc. They are free gifts of nature and exist in a state of superabundance. (2) *Economic Goods.* These goods are scarce and have to be paid for. In order to get them, one has to make some sacrifice. It is with economic goods that Economics is concerned, for economic activity consists in the utilisation of scarce goods for the satisfaction of human wants.

It may be emphasized again that the scarcity of economic goods is relative and not absolute ; it is in relation to requirements. A good may exist in a very small quantity but, since man may not have discovered any use for it, it will not be called scarce. On the other hand, there may be another good of which immense quantities exist, but if it falls short of human needs, it will be considered scarce. It is essentially a relative concept. We may conclude in Robbins's words : "There is no quality in things taken out of their relation to men which can make them economic goods.... Whether a particular thing or a particular service is an economic good depends entirely on its relation to valuation."

The distinction between economic goods and free goods is not of a permanent nature. A good may be a free good today and become an economic good tomorrow, or it may be a free good at one place and an economic good at another. Water in the neighbourhood of a natural spring is a free good, but not in a city.

Can a country's prosperity be measured by the quantity of free goods or of economic goods ? "It may be said, with an appearance of a paradox, that the more things in the nature of wealth a community has, the less prosperous it is" (Taussig). This is so because the welfare of the community does not solely depend on wealth, *i.e.*, scarce or economic goods. Free goods make their own contribution to human welfare. If more goods belong to this category, human welfare will be more widely spread. If, on the other hand, the cycle of economic goods becomes wider, it only means that goods which could be had free before, can be got now only on payment. Obviously this will mean a diminution of human welfare.

Other classifications of goods are : material and non-material transferable and non-transferable, private and public, personal (or internal) and impersonal (or external), consumers' goods and producers' goods, and so on.

2. Utility. Utility is another term which is used in Economics very frequently. We have seen above that every "good" or commodity possesses a quality by virtue of which it satisfies a human want. This want-satisfying power is known in Economics as utility. *Anything which satisfies a human want, directly or indirectly, is said to possess utility.* Utility is the *value-in-use* of a commodity.

When we say that a mango has 10 units of utility and a piece of pastry 7, we simply wish to declare our scale of preferences and indicate relative degrees of our satisfaction from the consumption of these two commodities. Utility is, therefore, simply a conventional representation or an objective expression of something subjective, *i.e.*, our degrees of preferences.

Every article possesses some inherent qualities on account of which it satisfies a human want. But when we speak of utility *we do not refer to such intrinsic qualities of a commodity.* On the other hand, we think of the commodity in relation to the wants of an individual. A cigarette, for example, has some quality in itself on account of which it is capable of satisfying a human want. But to a non-smoker it is of no use. *Utility is, therefore, subjective and relative.* Being subjective it varies from individual to individual. A horse has no utility for one who cannot ride nor a picture for one who cannot see. A person who has no ear for music nor an eye for a work of art will not be able to appreciate any. In the words of Chapman, "External goods are goods only in relation to internal goods".

Utility does not vary merely from individual to individual; it may also vary in the case of the same individual at different times. A change in the tastes, season, or fashion may affect the utility of a commodity or a service.

Utility may be distinguished from satisfaction. Utility is the power of a thing to yield satisfaction. Satisfaction is what we get ; it is the result of utility. If a thing possesses utility, it gives us satisfaction.

A distinction of greater importance is between utility and usefulness. The two words are often confused in the ordinary speech and are used as synonyms which, in fact, they are not. If a thing possesses utility, it does not necessarily follow that it is useful. Smoking is not useful. Drinking of wine and the use of other intoxicants are harmful. But in the eyes of the economist, cigarettes, wine and all such things possess utility for the simple reason that there are people who are prepared to pay for them, and whose wants they satisfy. The economist does not look at things from the moralist's angle. He is not swayed by ethical considerations when he wants to know whether a thing possesses utility or not. His simple test is : "Does it satisfy a human want ? Is anybody prepared to pay for it in order to obtain it for his consumption ?" If the answer is in the affirmative, the commodity possesses utility, however harmful its consumption may be. *The term "utility" thus has no ethical or moral significance.*

It may also be mentioned that the *term "utility" refers only to consumers' goods and not to producers' goods.* A bicycle has utility for one who uses it. It gives him satisfaction. But the machinery used in the making of the bicycles gives no such satisfaction to its manufacturer. He is solely guided by the motive of profit and does not get any personal satisfaction from the machine. Utility refers to personal satisfaction and not satisfaction in any other sense.

3. Value. "Value" is another term which has often caused confusion in the study of Economics. In the words of Adam Smith, "The word value has two different meanings and sometimes expresses the utility of some particular object, and sometimes the power of purchasing other goods which the possession of the object conveys." But the modern use of the word "value" differs from Adam Smith's.

Economists now use the word "value" only in the latter sense. For the first use of the word mentioned by Adam Smith, *viz.*, value-in-use, they use the term "utility.". *The word "value" is used in the second sense only, viz., value-in-exchange, actual or potential.*

Value of a commodity simply means what other commodity or commodities can be got in exchange for it. Value is the power of a commodity to command other things in exchange for itself. If a fountain-pen can be exchanged for two copies of your text-book, the value of the pen is equal to two copies of the text book. When value is expressed in terms of money, it is called price.

Can there be a general rise in values or prices ? *Value is relative.* We cannot speak of the value of commodity in absolute terms. We cannot, for example, say that the value of a particular commodity is great, without at the same time having at the back of our mind the number of commodities that it can buy. In the words of Samuel Bailey, " A thing cannot be valuable in itself without reference to another thing any more than a thing can be distant in itself without reference to another thing." Value is thus a relative term. It refers to the value of something else. If the value of one thing rises, the value of the other thing, in whose terms it is expressed, must fall. It, therefore, follows that *there cannot be a general rise in values, although there can be a general rise in prices.*

Let us understand why there cannot be a general rise in values. To take our previous example : 1 Fountain pen=2 Books. If the value of the fountain-pen increases, it will buy more books than before. In other words, the value of the books will go down. The value of both things cannot go up simultaneously. Thus value being relative, the values of all things cannot rise at the same time, *i.e.*, there cannot be a general rise in values.

But there can be a general rise in prices as it happened during the war. The price of everything went up. There are two sides of the equation here, the goods side and the money side. In this case, the goods side has gone up, while the money side (*i.e.*, the value of money) has gone down. When, therefore, prices have gone up, it means the value of things has gone up but the value of money has come down. Thus there can be a general rise in prices, but not in values.

4. Wealth. There has been a good deal of difference of opinion as to what constitutes wealth and what does not. Fortunately there is now a general agreement about the nature of this fundamental concept. Whenever the word "wealth" comes to our mind, we at once think of cash, land, buildings, machinery, furniture, mortgage rights, government securities, stocks and shares, and so on.

Now, if we attempt to generalise the nature of these "commodities", we shall find that they are all objects of human desire. They are wanted because they can satisfy human wants, directly or indirectly. *In short they possess utility.* We can, therefore, fix on one attribute which the things must possess before we shall agree to put them under the label "wealth".

But thinking further over the matter, we shall notice that the mere possession of utility is not a sure test of wealth. Air possesses immense utility. But is it wealth ? Does anybody pay anything for it ? No. It is not wealth. We can think of a host of similar "commodities"— sunshine, sand on the sea-shore, water coming out of natural springs, etc. They are not wealth, because they are unlimited in quantity. Therefore *limitation or scarcity is another essential attribute of wealth.*

One more attribute is necessary, *viz., transferability or marketability.* Unless we can possess things, they well not command any price. Possession is impossible without transferability. Unless a thing can be passed on in exchange, it cannot be wealth to the owner. It is not the bodily transfer that is necessary, mere transfer of ownership is enough. Moreover, it is not necessary that the things should be *actually* marketed. For example, public parks, libraries, schools, hospitals, etc. are wealth, though they are not bought and sold.

To sum up, there are three essential attributes of wealth : (i) utility; (ii) scarcity or limitation in supply ; and (iii) transferability or marketability.

Wealth as defined above is synonymous with economic goods because they possess utility, are limited, and are transferable. In the words of J.N. Keynes, "*Wealth consists of all potentially exchangeable means of satisfying human needs.*" *Anything which possesses value-in-exchange (in short, value) is wealth.*

Let us emphasize one point. *Wealth is a relative term.* It is their relationship to man which makes things wealth. There are several things for which human beings had at one time discovered no use. They were free goods and not wealth. Several by-products of industry were thrown away as rubbish. Only recently, molasses accumulated in the sugar factories in India to such an extent that they were even willing to pay something to those who would rid them of the nuisance. Setting up of distilleries changed them into wealth. Kalidas's dramas are not wealth to a barbarian. In Robbins's words, "Wealth is not wealth because of its substantial qualities. It is wealth because it is scarce."

Wealth, as understood in this sense, includes all material and non-material objects and rights and benefits arising from their use, as well as all kinds of services, provided they have exchange value. This definition of wealth excludes highly commendable things like love, friendship and character, simply because they cannot be bought and sold.

Let us now apply these tests to certain classes of goods and see if we can put them under wealth. Once again we must begin with a caution. We cannot dogmatically lay down that this is wealth, and that is not. A thing may be wealth under certain conditions, in a certain place, or at a certain time, and not wealth under an entirely different set of conditions. For example, air is not wealth ordinarily but becomes wealth in underground apartments where money has to be spent in making provision for it.

Consider the following :—

Personal Qualities. A surgeon's skill, a lawyer's debating talent, a person's intelligence and ability—are they wealth ? These personal attainments are a source of wealth. We pay the surgeon for his skill. He has probably spent a lot of money and labour in acquiring it. But the personal qualities are not regarded as wealth. They are not transferable, and hence not exchangeable. When we pay the surgeon, we do not buy his skill but simply his service. His skill is inseparable from his person. Wealth does not consist of what a man is, but what he has, something external to himself. But such qualities have, however, been called *personal wealth* by courtesy.

Personal Services. The services of the doctor, lawyer, teacher, domestic servant, etc.—are they wealth ? Yes, they are. They can satisfy human wants and thus possess utility ; they are scarce and exchangeable. They are rendered in exchange for money.

Money. But what about money itself ? It is said that money is merely a medium of exchange. It has no value of its own. Now, this idea is wrong. Metallic money can be easily regarded as wealth ; it has got intrinsic value, is scarce and exchangeable. But even paper money is wealth. It embodies purchasing power, and as such it represents a collection of commodities and services which the possessor of money can buy. Money has undoubtedly a value-in-exchange, and anything that has value-in-exchange is wealth.

Goodwill. It is intangible, but it is certainly wealth. It commands a price in the market. A firm which has laboured hard and built up its reputation can certainly convert this reputation into money in the event of the transfer of the business to somebody else.

Documents of Title. There is a large variety of documents which are regarded as wealth by their owners, *e.g.*, cheques, bills of exchange, promissory notes, bills of lading, government bonds or gilt-edged securities, stock and share certificates, insurance policies, mortgage deeds relating to land and buildings or other property-rights. All these things possess money value, although in the case of insurance policies the money value is equal to its surrender value at the time. But these documents are not wealth in themselves. They are evidences or merely certificates as to the ownership of wealth. They represent wealth lying somewhere on which the holders of these documents have a claim. They have been, therefore, called *representative wealth.*

5. **Wealth Classified.** Wealth may be *Individual* or *Private.* The wealth of an individual consists of his material possessions like cash, land, buildings, etc., and other personal effects, titles to property,

stocks, shares, patents, etc. It also includes intangible assets like the goodwill of his business. *His personal qualities, however, are excluded.* His debts are deducted from his total wealth.

Social or *Communal Wealth* consists of things which are the common property of the community, *e.g.*, public parks, public libraries, public buildings, State railways, etc.

National Wealth is the sum total of the wealth owned by the citizens of a country. It also includes social or communal wealth owned collectively by the community.

But national wealth can also be defined broadly. In a wider sense, many other things, which may be considered national assets, are included in the category of national wealth, such as mountains, rivers, healthy climate, good government, character of the citizens, etc. In this sense the Himalayas, the Ganga, and other such gifts of nature can be included in our national wealth.

Cosmopolitan wealth is the wealth of the whole world. It is the sum-total of the national wealth of all the countries of the world. In a wider sense, it includes mountains, rivers, etc.

Negative Wealth implies an obligation which must be offset against positive wealth. A debt is negative wealth to the debtor, but positive wealth to the creditor. Some animals, besides being dangerous, do a lot of damage and may be considered as negative wealth. Rabbits, pigs and monkeys may be regarded as negative wealth.

6. **Wealth and Income.** Careful distinction must be made between wealth and income. Wealth is a fund or stock of resources or assets owned by an individual or the community, while income is a flow of utility or satisfaction from it per unit of time, say per week, per month or per year. A person having property worth Rs. 5 lakhs gets therefrom an annual income of Rs. 25,000. The property is wealth and what it yields is income. Income may be defined "as the amount that may be consumed during a period leaving the individual as well off at the end as he was at the beginning."

7. **Wealth and Welfare.** One finds a continual but useless controversy going on among economists concerning wealth and welfare. We have seen that Economics makes wealth the centre of its study and not welfare. But it will be wrong to charge Economics with concentrating on selfishness and call it a dismal science. It is declared by economists that *wealth is studied not for its own sake but because it promotes human welfare.* Wealth is the means and welfare the end. The two are, however, quite distinct. Wealth refers to stock of goods, but welfare to a state of mind; it is the sum total of satisfactions and dissatisfactions.

It is now recognised that man's activities are not motivated by self-interest alone. Everybody seems to be after money. *Money, however, is not wanted for its own sake, but for the sake of the commodities and services it will buy.* When, therefore, the economist studies wealth, welfare is not forgotten; it is kept in the forefront.

Wealth is studied simply and solely because in this world of ours, *wealth is the only convenient measure of the intensity of human* *motives*. Other motives like love, friendship, family affection, charity etc., too, exert their influence. But the fact is that the steadiest and the strongest motive behind economic activity is the desire to get a money income.

There is another reason why Economics studies wealth rather than welfare. *Notions of welfare vary from individual to individual.* Everybody seems to have his own conception of what welfare consists in. Some would have us promote physical well-being, others moral, and still others spiritual well-being. Moreover, ideas of welfare have varied from time to time and from country to country. Rather than catch this will-o'-the-wisp, Economics builds itself upon a solid foundation of wealth, about the nature of which there is a complete unanimity.

There is in some cases a *divergence between wealth and welfare.* Air and sunshine, which are indispensable for life, and so for human welfare, are not regarded as wealth at all. Again, joy, love, friendship, health, culture, etc. which are of immense value in life and make it worth living, stand outside the pale of wealth. Some of *those things, therefore, which are highly conducive to human well-being, find no place in wealth.*

Look at the other side. *Several things included in wealth not only do not contribute to our material well-being but are, on the contrary, detrimental to it.* Narcotic drugs, pernicious books and several other evil things, and services, which are regarded as wealth by the economist, adversely affect our welfare.

Further, *a wealthy society is not necessarily a high society in the real sense of the world.* Rather in these days of stark materialism, the rich class seems to monopolise all the depravity one finds in modern society. Wealth corrupts, misleads and poisons the human soul. Goldsmith may well exclaim :—

"Ill fares the land, to hastening ills a prey,
Where wealth accumulates and men decay."

What may be wealth from the individual point of view, may not be so from the point of view of the society. A quack, for example, may make money without benefiting the society. There is often a divergence between private wealth and public welfare. There are people who seriously believe that it is easier for a camel to pass through the eye of a needle than for a rich man to enter Heaven. It may be said, therefore, that there can be no earthly connection between wealth and welfare.

But this is not so. We have perhaps painted wealth in unduly dark colours. Where we have mentioned its corrupting influences, we must also recognise its potentiality for doing good. All depends on the *way* it is used. A man of wealth can undoubtedly help himself and his family in maintaining a good standard of living and thus promoting his material welfare. And, what is even more important, he can help his less fortunate brethren.

In modern times, emphasis has been shifted from production to distribution, for it is believed that it is not merely on total wealth that the welfare of the community depends, but on its equitable distribution. Minimum wage systems have been instituted, laws have been passed against usury, attempts have been made to limit profits—all with a view to ensuring that wealth is made to yield the highest possible dividends in the form of human welfare.

Just see the modern tendencies in public finance—steeply progressive taxation of the rich, and provision of greater amenities for the poor in the form of better medical aid, better education, better roads and other means of social good, such as public parks, museums, libraries, etc. All such attempts are an open recognition of the fact that wealth is a powerful and, according to some, the only effective instrument of promoting human welfare. The relation between wealth and welfare is one of the closest.

CHAPTER III

CONSUMPTION

1. Consumption and its Importance. Having acquainted ourselves with the nature of Economics and made ourselves familiar with the terms used in Economics, we now embark upon the study of the subject proper. We take up the first department of Economics, *viz.*, Consumption. In the words of Ely, "*Consumption, in its broadest sense, means the use of economic goods and personal services in the satisfaction of human wants*". Just as man cannot create matter, so he cannot destroy matter. He can simply *derange it* by using up its utility. Consumption has, therefore, been also defined as *destruction of utilities*. The destruction may be instantaneous, as in the case of the meal that we take, or the destruction may be gradual as in the case of durable goods like furniture, houses, etc. *Consumption, however, does not consist in mere destruction*. There is no consumption unless satisfaction is obtained. If the house is destroyed by fire, it is no consumption.

Consumption is sometimes classified as *productive consumption* and *unproductive consumption*. When I use paper to write a letter, it is a case of unproductive consumption, but when the publisher of a book uses it, it is productive consumption.

Consumption is now being paid increasing attention by the economists. It is now clearly realised that it is consumption which gives production an initial push. "Sluggish consumers, sluggish business", is the maxim. The volume and direction of productive activity is determined by the consumers' desires for goods and services. Standard of living in a community is indicated by the nature of their consumption. The wholesomeness or otherwise of consumption will determine productive efficiency. Unplanned or unwise consumption is the greatest cause of inefficiency of industrial workers. The comparative inefficiency of Indian labour is in no small measure due to wrong consumption, *i.e.*, unbalanced diet, wasteful expenditure on social ceremonies, etc. Prudent consumption is as much our need as efficient production and equitable distribution.

2. Propensity to Consume.[1] The level of consumption determines the volume of employment in a country. It shows how important consumption is. The decision of individuals on consumption determines the volume of consumption. The decision to consume depends on decision as to how much to save. Thus propensity to consume is determined by subjective conditions (*i.e.*, human motives) and objective conditions like prices, tastes, capital gains or losses, changes in fiscal policy, rate of interest, etc. But the most important factor is the size of income. There is a stable functional relationship between the size of a consumer's income and the amount he spends. Thus $C=f(Y)$, where C is consumption, Y is income and f showing functional relationship between income and consumption is propensity to consume.

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[1] Stonier and Hague—*A Text-Book of Economic Theory*, 1953, Ch. XX.

We can construct a schedule of the propensity to consume showing the amounts that will be consumed at various levels of income in a community. About the nature of this schedule we can assume, quite realistically, (*i*) consumption will increase as the community's income increases, but, as a rule, not equal to the increase in income. Mathematically it can be put as $\frac{\delta c}{\delta y}$. δy is a very small increase in income and δc resulting increase in consumption. $\frac{\delta c}{\delta y}$ is the proportion of the increased income which is spent and is thus the marginal propensity to consume. It is positive but it is less than 1, *i.e.*, 1 is greater than it and it is greater than 0. (*ii*) People, as a rule do not consume more than they earn. (*iii*) As income increases marginal propensity to consume declines. This assumption governs the shape of the propensity to consume curve which is as under :—

TPC is the curve representing total propensity to consume of the community. Up to Rs. 4,000 the entire income is consumed. That is why the curve TPC and the dotted line drawn at 45° coincide. From that point onwards it takes a lower route. When the income increases to Rs. 10,000 consumption is Rs. 7,000 and saving Rs. 3,000. The bending down of the TPC shows that as income increases both the average and marginal propensities to consume decline, but the marginal propensity falls faster than the average propensity. Since the poor people consume a larger proportion of their income than the rich, we should tax the rich if we want to increase consumption and tax the poor if we want to reduce it.

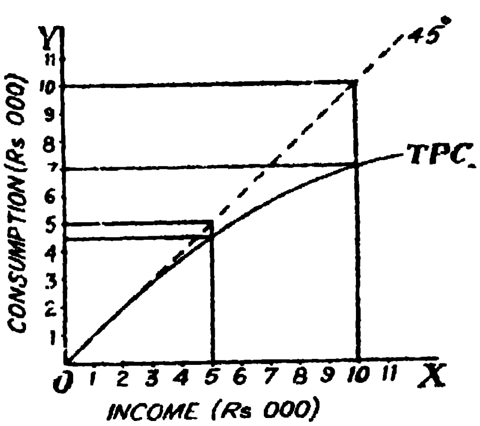

Fig. 1

3. Human Wants. Study of consumption is interlinked with that of human wants. Man is said to be a bundle of desires. "The life-history of a normal human being is the record of a continuous sense of incompleteness." It is a race towards an El Dorado, a mirage. Some people regard it as "divine discontent". Wise Providence seems to have ordained this discontent so that the springs of human joy and enthusiasm may not dry up. "Aspiration," says Stevenson, "is a joy for ever". There is no doubt that the human wants constitute one of the basic facts of economic life and a root cause of all economic progress. It is, however, an open question whether for individual happiness multiplication of wants is desirable or not.

Human wants show important characteristics. *They are unlimited in number.* A few of our wants lie in our conscious mind, but the great majority are to be found in our sub-conscious mind. When we satisfy one want another crops up. One will never come to the end of his wants so long as one lives.

Although human wants put together can never be satisfied, yet a *particular want is satiable.* This characteristic of human wants lies at the basis of the law of diminishing marginal utility. Since each particular want is satiable, the satisfaction that we derive from the consumption of a commodity goes on diminishing progressively as consumption proceeds.

Wants are Complementary. This means that to satisfy one want fully, we want several things together. Horse and carriage, eye-glass and the frame, etc., are wanted together. As a matter of fact, it is very seldom that there is a case of isolated demand. Every thing is wanted as part of a system of demands. *We want things in groups.*

Wants are Competitive. Our wants are unlimited but the means at our disposal are limited. We are compelled therefore to choose. We want to go to a coffee house, a cinema show, a sports meet, or witness a wrestling match, or buy a book, and so on. This gives rise to a law known as the law of substitution.

Some Wants are Alternative. For the satisfaction of a particular want, different alternatives are open to us. When we want a drink, we can have tea, coffee or cocoa.

Wants Recur. Repeated satisfaction changes it into habit.

4. Necessaries, Comforts and Luxuries. The commodities used for the satisfaction of wants may be classified as Necessaries, Comforts and Luxuries. By "necessaries" we mean those commodities and services the want for which *must be* satisfied. Necessaries have been classified as (1) *necessaries of life* which refer to commodities that are absolutely essential for our very existence; (2) *necessaries of efficiency*. They are likely to add to our efficiency, *e.g.*, a table, a chair and a table-lamp for a student; the benefit derived from their use is greater than the cost incurred: and (3) *conventional necessaries*. A person may have become addicted to a drug, tobacco or wine; or incur an expenditure which the society expects of him, *e.g.*, on marriages and other social ceremonies, or he has to wear a conventional dress.

"*Comforts*" refer to such commodities and services which a person would like to consume over and above the "necessaries" in order to make himself comfortable, *e.g.*, using an electric fan in summer and a heater in winter, thickly-cushioned chairs or beds, keeping a number of servants, etc. No doubt these things, too, add to personal efficiency, but not in proportion to the expenditure incurred.

"*Luxuries*" refer generally to one's living beyond one's means or station in life. It means wasteful expenditure. Ely defines a luxury as excessive personal consumption. "Luxury in its ordinary sense means," he says, "anything that satisfies a superfluous want".

"Luxury" in our minds is associated with bad consumption. But there are people who support the use of luxuries. It is said that luxuries are a provision against the rainy day. For example, ornaments and jewellery stand in good stead in times of adversity. Further, the desire for the enjoyment of luxuries applies a strong spur to human effort. The use of luxury articles improves one's tastes; it makes one refined and cultured; it lends colour to life, making it richer and fuller. Luxuries are said to provide employment.

These are not very sound arguments. A man may have the right to use his income as he likes, but he cannot escape social disapproval for anti-social and morally bad behaviour. As for creating work, it may be stated that the same expenditure in another channel may also provide more and better work, and also benefit the society. On the whole, expenditure on luxuries is not commendable.

But " luxuries ", " necessaries " and "comforts" are relative terms. They are relative to place, time or person and the social setting. The same thing may be luxury for one person and necessary for another. A motor car is a luxury to a *rais* living in a place of short distances, but not to a busy professional man or a minister or a high official.

5. Standard of Living. Necessaries, comforts and luxuries, to the use of which one may be accustomed go to make up one's standard of living. This standard is the outcome of varied influences. We partly inherit our standard of living from our parents, and then we shape it according to our own tastes, education, experience, social environments and our instinct of imitation. It is pleasant and easy to raise it if income goes up. But it is very painful to lower it, if the income goes down. The standard of living influences a worker's efficiency and so his earnings.

The standard of living of a community can be maintained or improved if (*a*) no economic resources available for use stand idle, (*b*) the available economic resources are set to produce in larger quantities those products which consumers most desire, (*c*) the income of the community is distributed among individuals in such a way that the greatest possible satisfaction is obtained from the limited national income, and (*d*) the total population and the total stock of capital are forthcoming in the most appropriate amounts.

6. Engel's Law. A law called the Engel's Law of Consumption has been propounded on the basis of a study of the standard of living or family budgets. Ernest Engel was the Head of the Prussian Statistical Bureau. He came to the following broad conclusions:

(1) As income increases the *percentage* expenditure on food and other necessaries of life decreases, and *vice versa.*

(2) The *percentage* expenditure on luxuries and on other cultural and recreational wants increases with an increase in income and decreases when income decreases. It almost vanishes in the case of low incomes.

(3) As for lodging or rent, fuel and light, *percentage* expenditure is invariably the same for all incomes.

(4) Whatever the income, *percentage* outlay on clothing is practically the same.

It is to be carefully noticed that it is the *percentage* expenditure, and *not total* expenditure, which increases or decreases.

In our own country, intensive inquiries have been made into family expenditure. Dr. Harold Mann made some inquiries in the Deccan, and the Punjab Board of Economic Inquiry also has made extensive inquiries of this nature. All such inquiries have borne out the truth of the rules formulated by Engel in about the middle of the last century, though the percentages are slightly different.

CHAPTER IV

CONSUMPTION (*Contd.*)

Law of Diminishing Utility

1. **Introduction.** We have already studied, in a preceding chapter, the meaning of the term " utility ". Utility means want-satisfying power of a commodity. We have also seen that utility is subjective and varies from individual to individual. Utility is not the same thing as satisfaction, nor is the term " utility " synonymous with usefulness. It has no ethical significance. We shall now study a very important law in consumption that governs utility, *viz.*, Law of Diminishing Marginal Utility.

2. **The Law of Diminishing Marginal Utility.** The Law refers to the common experience of every consumer. Suppose a person starts eating apples one after another. The first gives him great pleasure. By the time he starts taking the second, the edge of his appetite has been blunted, and the second apple, meeting with a less urgent want, yields less satisfaction ; the satisfaction of the third will be less than that of the second, that of the fourth less than that of the third, and so on. The satisfaction will go on decreasing with every successive apple till it drops down to zero ; and, if the consumer is forced to take more, the satisfaction may become negative, or the utility may change into disutility.

The idea will be clear from the following table :—

1 *Units* : (Apples)	2 *Total Utility* : (Units of satisfaction)	3 *Marginal Utility* : (Units of satisfaction)
1	20	20
2	38	18
3	53	15
4	64	11
5	70	6
6	70	0
7	62	—8
8	46	—16

N.B. These figures are merely illustrative representations of the amount of utility. Any other figures may be taken, provided variations in the amount of utility are similar to those in the table given above.

When our hypothetical consumer goes on taking apples, the extra satisfaction that he gets by the consumption of each successive apple goes on decreasing till it goes down to zero at the 6th, and then it becomes negative (*see* column 3). The total utility goes on increasing until the consumption of the 5th; but, it is worth noting, *that it increases at a diminishing rate.* In the words of Chapman, "The more we have of a thing the less we want additional increments of it, or the more we want not to have additional increments of it". Marshall states the law thus :

" *The additional benefit which a person derives from a given increase of his stock of a thing diminishes with every increase in stock that he already has.*" We might add that with every diminution of his stock, the marginal utility will go on increasing. In other words, the utility varies inversely with the stock, although not necessarily in the same proportion. Two important reasons can be given for diminishing marginal utility : (*a*) Each particular want is satiable, and (*b*) goods are imperfect substitutes for one another and they tend to be consumed in appropriate proportions.

Diagrammatic Representation. The following diagram illustrates the Law of Diminishing Utility as applied to the consumption of apples. (*See* the table on the previous page.)

OX and OY are the two axes. Units of apples are measured along OX and units of utility along OY. Utility of the first apple is represented by the rectangle standing on a portion of the axis of X (Fig. 2). Similarly, the utility of each successive unit consumed is represented by the rectangles as shown in the diagram. These rectangles become smaller and smaller, as consumption of apples proceeds. The sixth apple has no utility. The seventh and the eighth have negative utilities, as shown by the rectangles below the axis of X.

The apples are big units. If a commodity is consumed in sufficiently small units, the rectangles would become thinner and thinner. We can theoretically assume that they become so thin as to be represented by just a line. Now, if the tops of such lines, standing shoulder to shoulder, are joined together, we get a curve sloping from left to right, as shown in Fig. 3 (next page).

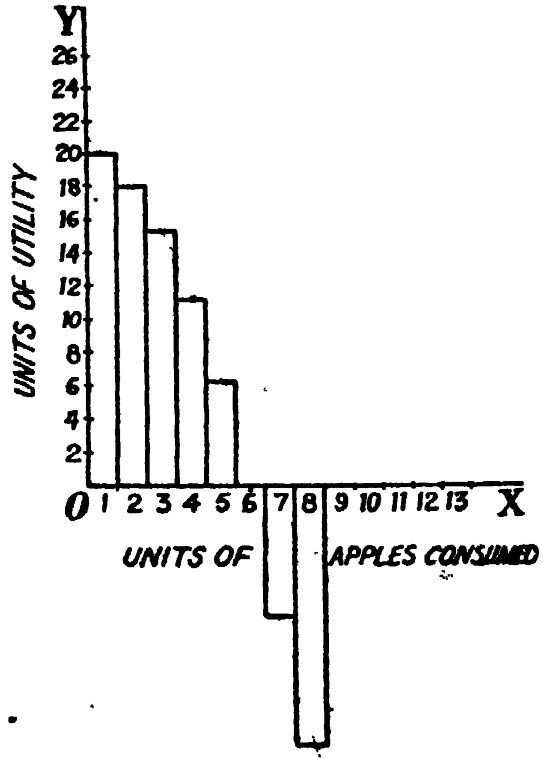

Fig. 2

If from any point P on the curve, PM is drawn perpendicular to OX, PM will be the marginal utility of the OM quantity consumed. If consumption is carried on to OM', the marginal utility becomes negative, *i.e.*, P'M'. When consumption is OZ, the marginal utility is zero.

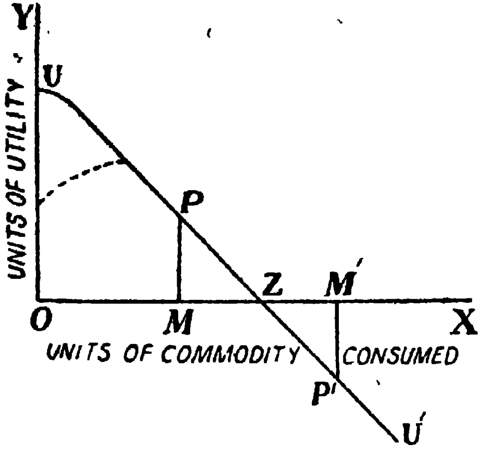

Fig. 3

We have assumed that the law begins to operate after the first unit of consumption, as in our illustration of apples. But it is quite possible that up to a point marginal utility may rise. This can be represented by the curve first rising to the right, and then falling. This is indicated by the dotted line.

3. Limitations of the Law of Diminishing Utility. The Law of Diminishing Utility as enunciated above is based on certain assumptions:

(*i*) It is assumed that the commodity is taken in *suitable units.* If you begin taking water by spoonfuls when thirsty, or if you want to judge the utility of the morsels rather than the full *chapatis*, your thirst or hunger will be at first stimulated rather than assuaged, and the utility may, at first, rise instead of falling. But, sooner or later, a point will be reached when utility will begin to diminish. Unless, therefore, the units are of a suitable size, the law will not hold good.

(*ii*) It is further assumed that the commodity is taken *within a certain time*, otherwise the law will not apply. If you take your first meal at 10 a.m. and the next at 2 p.m., there is no reason why the utility of the second meal may be less. But in case another meal is offered to you within an hour of your taking the first, the law will apply, and the utility of the second meal will be less.

(*iii*) Another assumption is that the *character of the consumer does not change.* The consumer must not have developed a craving. The more music one hears, the more literature one reads, the more wine a drunkard takes, the more money a miser has, the greater will be the utility in each case. This is so because the character of the consumer has undergone a change. More reading lifts a person to a higher plane, and he is able to appreciate and enjoy literature better than he could before. Besides, the law applies to normal men and not to eccentric or abnormal persons like misers.

(*iv*) It is also essential that the *income of the consumer remains the same.* Any change in income will falsify the law. A rise in a man's income may raise in his eyes the value of the various plots in his big compound of which he could not make much use before.

(*v*) In the case of rare collections, the law does not hold good. If a man is collecting ancient coins, the more he is able to collect, the greater will be his satisfaction.

(*vi*) There is another exception. The law says that the utility decreases when there is an increase in our stock. But in some cases the utility changes, not because of a change in what we have but from a *change in other people's stock*. For example, if I have a rival in the town collecting ancient coins, and somehow he loses his collection, the utility of my collection automatically goes up. In the same manner, utility to me of my telephone increases as the number of connections increases. The value of my land goes up without any change in its dimensions when a railway station has been built nearby.

(*vii*) The utility also depends on our other possessions. The carriage may be lying useless with us, but as soon as we are able to buy a horse its utility at once goes up.

(*viii*) Further, utility depends on fashion. The utility of my dress goes up when that dress comes in fashion. If, on the other hand, it goes out of fashion, utility goes down.

The law of diminishing utility, like other economic laws, is merely a statement of a tendency. It depends upon so many conditions. If the conditions are not fulfilled, the law does not apply as in the many exceptional cases mentioned above.

4. The Law of Diminishing Marginal Substitutability. The law of diminishing marginal utility is open to several objections. Apart from the fact that utility, being subjective, is conjectural, a consumer, while buying a commodity, is anticipating satisfaction which may be different from actual or realised satisfaction.

Further, stopping purchasing at a particular unit called the marginal unit, implies rationality and fine calculations of a type not found in an average consumer.

Besides, in any attempt to measure utility, it is assumed that the marginal utility of money remains constant, whereas the fact is that, with every new purchase, the marginal utility of money goes up, since the stock of money is reduced.

A fundamental defect in the law of diminishing utility is that attention is focussed on one commodity isolated from the rest. Actually, however, a consumer is not thinking of one isolated commodity when he is spending money but a host of other commodities which he could purchase with that sum. It is, therefore, more proper to express consumer's demand in terms of scales of preferences.[1] It is realised that we can buy *more* of one commodity only by sacrificing another. A consumer considers the relative utility of small increments of a number of commodities and substitutes one for the other. That is why it has been suggested that it will be better to speak of the law of diminishing marginal substitutability in place of the law of diminishing marginal utility. The marginal substitutability of a commodity is represented by the number of units of some other commodity that can be substituted for some units of the former leaving the consumer neither better off nor worse off.[2]

In case a consumer can be induced to sacrifice a unit of a particular commodity only by an offer of a larger quantity of some other commodity, it would indicate greater marginal substitutability. Normally, however, a consumer will be content with a smaller number of units of the other commodity in order to forego one more unit of the commodity he has. Hence marginal substitutability will diminish. Thus the law of diminishing utility can well be re-christened as the law of diminishing substitutability and this will be an improvement inasmuch as it steers clear of the Marshallian assumption of constant marginal utility of money and the Jevonian quantitative conception of utility.

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[1] *See* sections 3 and 13 in Ch. V.

[2] *See* Marginal Rate of Substitution, sec. 4, Ch. V.

5. Some Implications of the Law. The law of diminishing utility does not operate because the successive units of the commodity are inferior. Although it is understandable that if a unit is of inferior quality *ipso facto* its utility will be less, yet the law is far more fundamental. It is independent of quality. The apples may all be of a uniform quality, still the additional utility will decrease as consumption proceeds.

The law is also independent of choice. The additional utility of each successive apple falls not because our eye is set on sweets. The law will apply all the same even if there is nothing else before us except apples. We must, sooner or later, get fed up with a commodity irrespective of the fact whether any other choice is open to us or not.

It follows from this law that more urgent wants are satisfied first. As the stock increases, it will be put to less and less urgent uses, and the reduction would mean the reversing of the process.

The law holds good in all types of satisfactions whether good or bad. We do not assume rationality on the part of the consumer. Nor do we assume that there is a rigidly fixed order in which wants are arranged by all, although the order will roughly be the same in the same class of people.

6. Marginal Utility or Significance. Where is the end or margin of a man's purchase ? When a man is purchasing a commodity, he is consciously or unconsciously weighing in his mind the price he has to pay and the utility of each unit. He will continue purchasing till the utility equals the price. Here is a fundamental proposition of the theory of consumer demand : " A consumer will exchange money for units of any commodity, A, up to the point where the last (marginal) unit of A which he buys has for him a marginal significance in terms of money just equal to its money price."[1] (Refer to the table given in section 2.)

Where will our consumer stop ? It depends upon the price. If the price is 6 pice per apple, then he will stop at the 5th, for there the utility will be equal to the price (marginal utility being represented in pice-units). If the price is 11 pice per apple, he will stop at the 4th and if they are free, then he will go on consuming till the additional utility comes down to zero (*i.e.*, up to the 6th unit). He will not go beyond this point because dis-utility will be the result. He stops at a point where the price and the utility are just equal. This is called the marginal purchase and the *extra* utility at this point is called the marginal utility. It is a point where we consider just worth our while to purchase, for here the discomfort of parting with the money and the benefit derived from the purchase of the commodity just balance.

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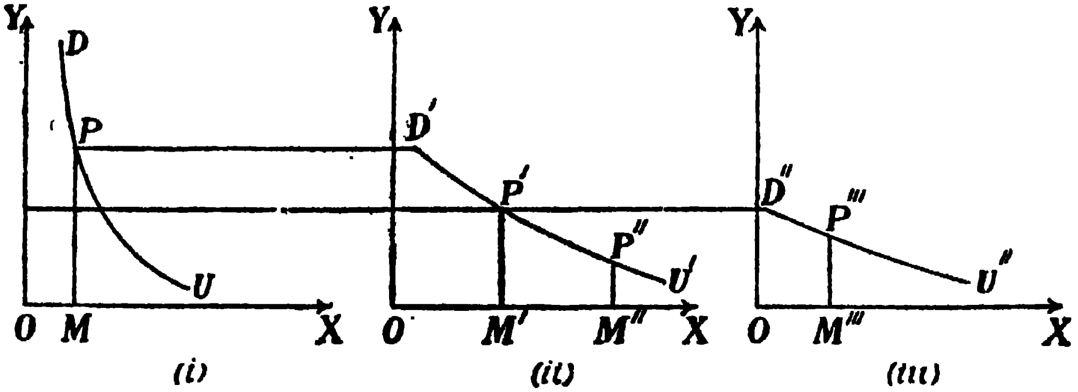
[1] Stonier and Hague—*A Text-Book of Economic Theory*, 1953, p. 40.

Marginal utility has also been defined as the *addition made to the total utility by the consumption of the last unit considered just worth while.* Thus if we buy 5 apples, the 5th is the marginal apple. But marginal utility is not the utility of the 5th apple, because all the apples are supposed to be alike. It only refers to the addition made to the previous total by the consumption of this particular apple. Marginal utility is the increase in total utility resulting from the consumption of the marginal unit.

The margin is not something rigid or fixed. It shifts forward and backward according to price. If the price falls, margin will descend, and *vice versa.*

7. **Where a Commodity has several uses.** Few commodities are specific. Generally a commodity can be put to several uses. First it is put to the most urgent use and then when its marginal utility has come down to the initial utility in the second use, it will begin being used for both uses. When the marginal utility in the second use has come down to the initial utility in the third use, then the commodity will be put to all the three uses, and so on. This phenomenon can be diagrammatically represented as under :—



(i) 1st use.

(ii) 2nd use.

(iii) 3rd use.

Fig. 4.

Up to OM units the commodity will be put to the 1st use only, because till then the utility of all units in the 1st use is higher than the initial utility D'O in the second use. If we have larger stock than OM, it will be then put to both uses, but up to OM+OM' only. After that point, marginal utility in the 2nd use is equal to the initial utility in the 3rd use and the commodity will be put to all the three uses, because some units in the third use, *e.g.*, OM''' (Fig. *iii*) has greater utility (P'''M''') than P''M'' (Fig. *ii*) in the second use.

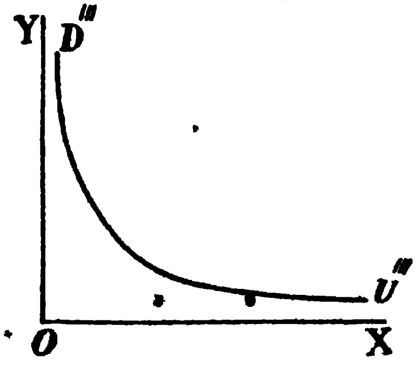


Fig. 5.

Combined curve of three uses.

(Fig. 5) is a combined curve showing the utilisation of the commodity in all the three uses.

It is quite obvious that if a commodity can be put to several uses, its marginal utility will not decline so rapidly as when it has only one use. 'When it can be used for a number of purposes, the fall in its marginal utility will be arrested.

8. **Marginal Utility of Money.** Does the law of diminishing marginal utility apply to money ? It is said that there can be a limit to the purchase of a commodity, but there is no such limit to the acquiring of money. Money is a general purchasing power. It enables the purchaser to buy anything he likes. Hence it is said that one can never reach a stage where money ceases to be desired.

We may concede the strength of this argument. But it is also true that the law of diminishing utility certainly applies to money too. As money increases, its significance to the owner decreases. The rich man attaches much less importance to each unit of money than the poor. He spends it more freely and is much less worried in case he happens to lose a certain portion of it. Every increment in the amount of money that a man has brings him less and less extra pleasure. Hence the law of diminishing marginal utility applies to money also.

9. **Marginal Utility and Price.** It is clear from the discussion in section 6 that marginal utility and price coincide, or price measures marginal utility. The consumer stops where the price and the utility are equal, and this point is the point of marginal utility. All units of the commodity being interchangeable, what is paid for the marginal unit is paid for every other unit. Therefore, we can say that marginal utility determines price. It is marginal utility and not total utility that determines price, otherwise the price of water would have been high, and that of gold low. Really, marginal utility does not *determine* price ; it simply *indicates* it. The determining factors are demand and supply. If the price changes, marginal utility will change too. Price and marginal utility thus move together.

Social Marginal Utility. But whose Marginal utility determines price ? Marginal Utility is subjective and is different with different individuals, whereas there is one price prevailing in the market. The marginal utility which determines price in the market is not the utility of any particular individual but a sort of *average of all individuals in* the community and may be called the *social marginal utility.* It is marginal utility to the society as a whole. Market price, therefore, does not represent the marginal utilities of *all* buyers owing to their different incomes and circumstances. *The differences of the circumstances of each consumer are reflected not in different prices paid but in different quantities purchased.* It is in this way that the marginal utilities of all are equalised.

Marginal Utility and Supply. Marginal utility is a function of supply, *i.e.*, it varies with supply. In the case of a free good, where the supply is unlimited, the marginal utility is zero. Only in the case of scarce goods is the marginal utility positive. It increases as the supply contracts and decreases as it expands. It comes down to zero when the supply is superabundant. Hence marginal utility varies inversely with supply *i.e.*, greater supply less marginal utility and *vice versa.*

Relative Marginal Utility. Marginal utility of one thing is not independent of the marginal utility of other things. As Knight observes, " Utility is relative and its essence a comparison." When we are considering whether to buy a little more or less of one thing, we also compare, consciously or unconsciously, the marginal utility of anything else that we could buy. Similarly, a manufacturer always compares the marginal utility of, say, an extra labourer with that of a machine, and so on. Such comparisons are constantly going on in our minds, and thus the marginal utility of a commodity has always reference to the marginal utilities of other commodities. Thus marginal utility is not to be considered in an absolute sense.

Although the law of diminishing marginal utility will apply even if there were only one commodity in existence and there were no choice, yet the fact is that there *is* a choice. There are so many other commodities that we can purchase. We stop buying mangoes because we would like to purchase some plums too, and we stop buying plums so that we may also have a few peaches. Thus the marginal utilities of all these three commodities become inter-connected. In short, marginal utility is relative.

10. Practical Importance of the Law of Diminishing Marginal Utility. The law of diminishing utility has great practical importance: (1) We have seen that the law of diminishing marginal utility applies to money too. This forms the basis of the theory and practice of taxation. A progressive system of taxation, imposing a heavier burden on the rich people, is a practical application of this principle in the field of public finance.

(2) The law explains why, with increase in its supply, the value of a commodity must fall. It thus forms a basis of the theory of value. As such its practical importance both to the general consumer and the businessman can hardly be exaggerated.

(3) It is this law which tells us why demand curves slope downwards. It is due to this law that smaller utility lines cut large portions of the commodity line, *i.e.*, X-axis [*see* utility curve in section 2, Fig. 3].

(4) It also explains the divergence between value-in-use and value-in-exchange. Air has great utility (value-in-use) but little value-in-exchange, because it has no marginal utility.

(5) The socialists take their stand on this law when they advocate the re-distribution of wealth in favour of the poor. The marginal utility to the rich of the wealth they lose is not so great as the marginal utility of this wealth to the poor.

11. Marginal Analysis. In the above sections, we have referred to the marginal utility and its relation with price. The marginal analysis occupies a very important place in economic theory. The tool of marginal analysis has been used in the elucidation of value and distribution theories. In actual life, our attention is always focussed on the margin. The motto is : " Take care of the pennies and the pounds will take care of themselves." It is the marginal purchasers who influence price. We are always weighing the profitability of buying a little more or a little less of a thing. It is through the margin that the law of substitution works and we are able to arrange our expenditure in such a manner as to give us the maximum satisfaction. The margin is not a fixed point. It moves forward and backward in response to changes in price.

The marginal analysis is, however, based on certain assumptions which do not always hold good : (1) It is assumed that demand and supply are sensitive to slight variations in prices which is not always the case. (2) The units of a commodity are supposed to be homogeneous which in actual practice are generally heterogeneous. (3) We assume rationality of human behaviour, whereas actually human actions are also governed by custom, habit, sentiment or prejudice. However, men on the average do act rationally. (4) The marginal analysis assumes continuity in the demand and supply curves. But the fact is that we do not consume a commodity in continuous and infinitesimal increments. Durable goods like a bicycle, a radio set, etc. are purchased in one single unit. But it is possible in such cases to calculate the benefit derived from the use of such goods per unit of time, per day or per week. (5) It is further assumed that consumer's wants remain unchanged. (6) It is also assumed that a consumer has a fixed amount of money at his disposal. (7) We also assume that there is a large number of buyers of whom he is only one.

In spite of these objections, the marginal analysis is still proving fruitful in the discussion and solution of economic problems. Modern economists are, however, shifting their attention from the study of individual behaviour to aggregate or mass behaviour—the *macro-economic* approach as distinguished from *micro-economic* approach. To this extent the utility of the marginal analysis has been reduced, because the marginal analysis represents the individual or micro approach.

12. Can Utility be Measured ? We have already seen that utility is the want-satisfying power of a commodity. But it does not depend on any intrinsic quality of the commodity itself; it rather depends on the attitude of the consumer. A mango possesses inherent qualities to give satisfaction to a consumer. But if somebody is prohibited from taking it under medical advice, for him it possesses no utility. Utility is, in other words, subjective.

Utility differs from individual to individual and with the same individual it is different at different times and in different circumstances. An individual can, of course, compare in his own mind the utility of different commodities to himself. But there seems to be no objective standard by which he can measure the utility of one commodity in any absolute sense. Utility is not a magnitude (quantity) which one can add or subtract. It can, however, be ranked and compared. We can speak of it in terms of " more or less " but not *how much more* or *how much less*.[1] Utility simply indicates the state of mind of a consumer.

Can we measure a person's mental state ? Obviously not. We possess no measuring rod by which we can measure the intensity of a person's satisfaction. We have, however, luckily a rough-and-ready measure in money. It helps us in comparing the intensities of two satisfactions. Suppose I have Rs. 100. I am thinking of buying a bicycle. If I am on the margin of doubt whether I should go in for it or not, and if I am indifferent whether I keep my money or purchase a bicycle, then it is evident that I attach the same importance to the bicycle as to a sum of Rs. 100. In that case, it can be said that to me the utility of the bicycle is equal to Rs. 100. In the same way, the utility of a camera may be equal to Rs. 100. This sum of Rs. 100 will thus equate the utilities of the bicycle and the camera or of another thing or group of things for which I am prepared to pay the same sum. *Money measures utilities. The utilities of two commodities are in the same ratio as the ratio of their respective market prices.* Actually, our experience and long habit of consuming certain commodities enable us to compare utilities of two commodities independently of money.

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[1] Knight, F. H.—*Risk, Uncertainty and Profit* (1940), pp. 66-9.

We can measure desire and not satisfaction. There is another point. When I am on the margin of doubt whether to go in for a camera or a bicycle, I am really comparing *expected* satisfaction as distinguished from *realised* satisfaction. But we know that anticipated pleasure is generally greater than the pleasure actually realised ; at any rate, the two do not coincide. Here again, our long experience and fixed habits help us, and we can be fairly sure as to what the expected satisfaction will be. But it is well to remember that the intensity with which a thing is desired is different from the satisfaction that is actually obtained. There is no means to measure satisfaction but the intensity of desire can be measured by the money offer. Economists generally assume that the two are the same.

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CHAPTER V

CONSUMPTION (*Contd.*)

The Law of Substitution

1. **Introduction.** We have seen that wants are competitive. We have, therefore, constantly to make a choice between the more urgent and the less urgent wants. When we are weighing in our mind whether to buy a little more or a little less of a commodity, we seem to balance the marginal utility of the commodity and that of money. *But what we are really balancing is the marginal utility of that particular commodity and marginal utility of a host of other commodities which could be purchased with that amount of money.* Money thus builds a bridge for us to pass from one commodity to another. This is how substitution takes place. It is not merely a substitution of one thing for another satisfying the same want, *e.g.*, substitution of tea for coffee, but substitution of entirely different commodities.

2. **Statement of the Law.** Every prudent person wants to make the best of his or her resources. This is necessary because resources are scarce in relation to wants—a fundamental proposition with which we started the study of Economics. Every consumer aims at getting the maximum satisfaction possible. For this purpose, he will substitute the more useful for the less useful thing. When he has done so, it will be found that marginal utilities in each direction of this purchase have been equalised.

Our hypothetical consumer is acting consciously or unconsciously on the principle which has been called by various names, the Law of Substitution, or the Law of Indifference, or the Law of Equi-Marginal Returns, the Law of Economy of Expenditure, the Law of Maximum Satisfaction. It is called the Law of Substitution, because we substitute one thing for another. It is known as the Law of Maximum Satisfaction, because through its application we are able to maximize our satisfaction. It is called the Law of Equi-Marginal Utility because it is only when marginal utilities have been equalised, through the process of substitution, that we get maximum satisfaction.

It happens like this : After the consumer has spent some of his money on a particular commodity, the marginal utility to him of the commodity begins to fall, until he feels that he would gain greater satisfaction by spending additional units of money on something else. He goes on substituting one thing for another (after a point), until the whole of the money he wanted to spend is exhausted. When this is done, he has obtained equi-marginal utility. He cannot now increase his total utility by spending more on one thing and less on the other. If he could do so, he would have done it already. Any rearrangement will mean a greater loss than gain in utility, the best arrangement being the one which equated his marginal utility under each head of expenditure. When expenditure of a consumer has been so adjusted, that is, when marginal utility in each direction and his purchases is the same, it is called *consumer's equilibrium*. Thus he has no desire to buy any more of a good. Given a set of market prices, his wants and his income, the consumer may be said to be in equilibrium when marginal utilities have been equalised and maximum satisfaction obtained. There will then be no inducement to revise his scheme of expenditure. He will continue to buy the same commodities and in the same quantities until either his income or his wants change. Adjustment of wants to one another and to his environments is a sign of consumers' equilibrium. For a consumer "to be in equilibrium with respect to all goods the marginal significance of *all* goods in terms of money must equal their money prices."

In order to derive maximum satisfaction from the amount of money that a consumer has, he will so apportion his expenditure that the marginal utility of the goods purchased will be in proportion to their prices. Thus

$$\frac{\text{M.U. of X}}{\text{Price of X}}=\frac{\text{M.U. of Y}}{\text{Price of Y}}=\frac{\text{M.U. of Z}}{\text{Price of Z}},\text{ and so on.}$$

In case the price of one commodity rises, less of this commodity and more of other commodities will be purchased so that the proportion will be restored. In the case of durable goods it may not be possible to maintain proportionality. The above equation will hold good only if the consumer's tastes and other circumstances remain unchanged.

This position is, however, unrealistic. In real life, no sensible consumer bothers about making minute marginal adjustments. Human beings are not calculating machines. Similarly, none thinks beforehand as to how he will react to any big changes in his environments. Finally, the consumers tend to have a list of habitual purchases and a change will be made only when there is a marked change in his circumstances.

The law can be illustrated with the help of the diagram given in the margin here.

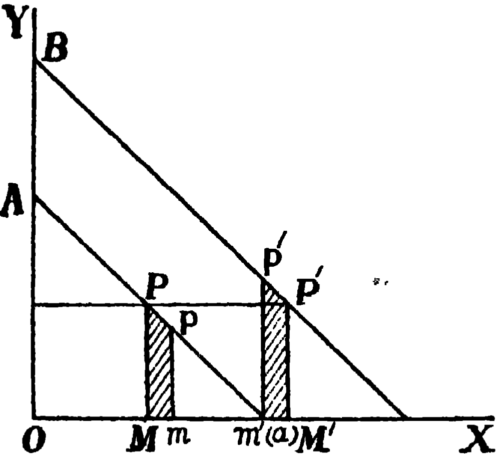

Fig. 6.

Units of commodity consumed.

Let there be only two commodities, bread and milk, on which money OM+OM′ has to be spent. Let A and B, respectively be the utility curves of bread and milk. If OM is spent on bread and OM′ on milk, the marginal utilities of the commodities (or of the money spent on them) are equal, PM=P′M. The Law of Substitution or Equi-Marginal Utility asserts that this distribution of. money achieves maximum total utility, *i.e.*, OMPA+OM′P′B is the maximum. If that is so any other distribution should give smaller total utility. Let us see whether this is so.

Suppose *a* stands for a small unit of money. Further suppose that *a* more is spent on bread and *a* less on milk. The marginal utility of milk will rise to *p′m′* and that of bread will fall to *pm*. As shown by the shaded areas, the loss of utility will be more than the gain by this new arrangement. The total utility will be less than before. Thus the total is maximum when the marginal utilities are equal.

It is very rare that in this process of substitution one commodity is entirely replaced by another, *e.g.*, bread replaced by biscuits or vegetables replaced by curd. We want a certain assortment of goods and in our search for the most useful assortment, we try some changes on the fringe of each commodity, a little more of one and a little less of the other. Substitution takes place at the margin.

3. Indifference Curves. The Marshallian analysis of consumer's behaviour rests on two assumptions : (1) a consumer wants to maximise his utility, and (2) the utilities can be added. It has been objected that utility is immeasurable. Hence indifference curve analysis has been substituted for the Marshallian analysis. The indifference curve analysis retains the Marshallian assumption that the consumer wants to maximise his utility, but it does not require the second Marshallian assumption that utilities *can be added*, although it is assumed that they *can be compared* as greater or less.

A system of indifference curves represents the preferences of the consumer between the two commodities. Each indifference curve is drawn on the assumption that for all possible points on an indifference curve the total utility remains constant. A point on an indifference curve represents a given combination of X and Y. The property of all the possible combinations of X and Y along an indifference curve is that they all represent the same total utility. Hence the consumer is likely to be indifferent as to the various combinations along an indifference curve or, in other words, all of these combinations are equally satisfactory to him, for they represent the same total utility. ✓

Properties of Indifference Curves. How then shall we draw an indifference curve ? Indifference curves, as they are usually drawn, are falling to the right. This is so because we assume that along an indifference curve the total utility remains constant and if all the units of a commodity give positive utility to the consumer, then his total utility can remain constant only if an increase in one commodity is accompanied by a diminution of the second commodity. If 5 units of X and 10 units of Y give a certain total utility, then if units of X increase to 6, while the units of Y remain constant at 10, then we shall not be on the same indifference curve for the total utility of 6 units of X and 10 units of Y will be greater than that of 5 units of X and 10 units of Y, for the second combination contains more of X and the same amount of Y. For the total utility to remain constant along an indifference curve, it is necessary that when the amount of X increases, the amount of Y shall decrease, and *vice versa.*

In the adjoining figure P, P′ and P″ represent different combinations of X and Y, all having the same total utility. At P, OM units of X and OQ units of Y are selected. At P′, while units of X increase from OM to OM′, those of Y fall from OQ to OQ′, so that the total utility at P and P′ remains constant.

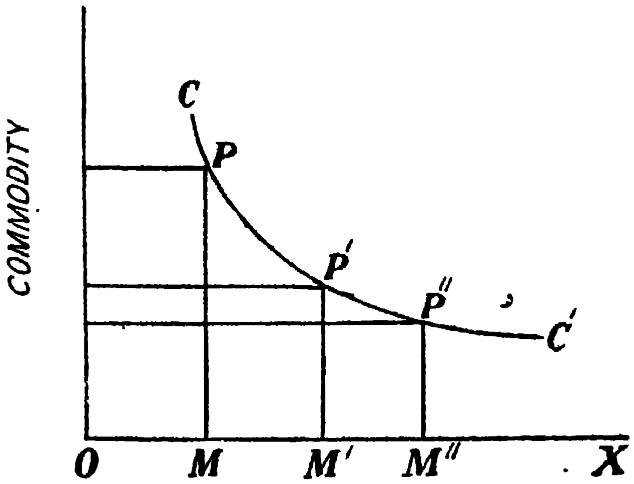

Fig. 7

(2) *Indifference curves cannot intersect.* One of the properties of indifference curves is that they cannot intersect. If they do intersect, we get some absurd results. In the accompanying figure, indifference curve C_2 represents higher total utility than indifference curve C_1. Hence OM of X+OQ of Y > (is greater than) OM of X+OR of Y. Now let the curves intersect at a point S. Since S is a point common to both the indifference curves, therefore OL of X+OT of Y=OM of X+OR of Y=OM of X+OQ of Y, which means OR of Y=OQ of Y, which is absurd. Hence indifference curves cannot intersect each other.

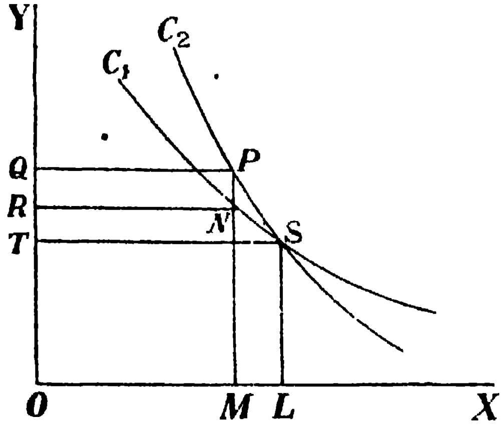

Fig. 8

2. But this does not settle the problem of the shape of an indifference curve. A falling curve can have three possible shapes : it may be a straight line (curve B), it may be convex to the origin (curve A) or it may be concave to the origin (curve C). Indifference curves, as they are usually drawn, are of the shape of curve A that is, they are convex to the origin. Why is this so ? It is so because of an additional assumption from the old law of diminishing marginal utility. That is, the more we have of a thing, lower is its marginal utility and, therefore, to part with a given unit of it we require less and less of the other commodity. Now this condition is fulfilled only in the case of curve A, which is convex to the origin. We draw below a falling curve which is concave to the origin. Now this curve does not conform to the law of diminishing marginal utility. When we have a small stock of commodity X (OM), to part with a unit (MM′) of X, we require QQ′ of Y. When the stock of X is large (we have OM″ of X) to part with a unit (M″M‴=MM′) we require Q″Q‴,

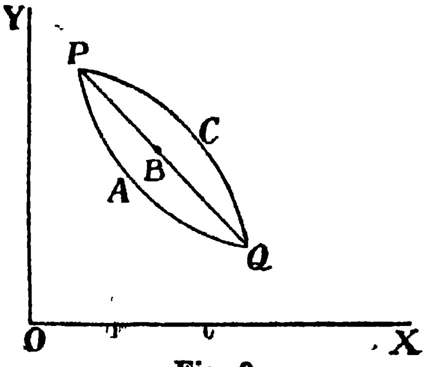

Fig. 9

which is not less than but greater than QQ'. Hence if the law of diminishing marginal utility is true, this cannot be the possible shape of an indifference curve. The reader can verify for himself that the law of diminishing marginal utility will also not hold true if an indifference curve happens to be a straight line. Only a falling curve which is convex to the origin conforms to the law of diminishing marginal utility. Hence if the law of diminishing marginal utility is valid, indifference curves must be drawn convex to the origin.

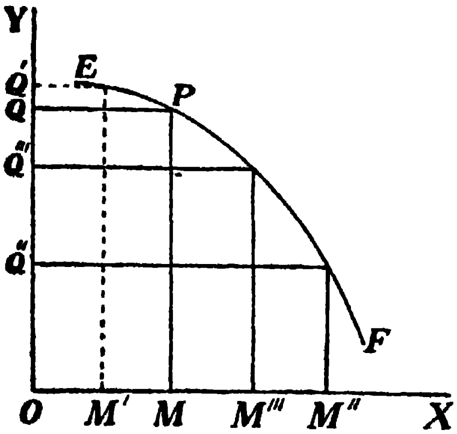

Fig. 10.

Thus, there are two assumptions upon which we draw an indifference curve: (1) that along an indifference curve total utility remains constant (this makes the curve a falling one); and (2) that the law of diminishing marginal utility holds true. This assumption gives us an indifference curve which is convex to the origin. The slope of an indifference curve at a particular point measures the ratio of marginal utilities of the two commodities.

Indifference Map. A system of indifference curves is called the indifference map. A particular indifference curve is drawn on the assumption that on all points along this curve the total utility remains constant, that is, the consumer is indifferent among the various combinations. Let us take the case of a child who has to choose between two commodities: biscuits and chocolates. The scale of preferences of this child may be indicated by the following table which shows the various combinations of biscuits and chocolates as between which he is quite indifferent:

	Chocolates	and	Biscuits
	2	,,	114
or	3	,,	93
or	4	,,	75
or	5	,,	59
or	6	,,	45
or	7	,,	36
or	8	,,	28
or	9	,,	21

This table does not show his complete scale of preferences, but only a portion thereof. These figures do not represent any mathematical series. Any series will do, only they should represent one fact, *viz.*, that the more chocolate the child has obtained in exchange, the fewer biscuits he will be willing to part with in order to get another chocolate. Suppose the child has 5 chocolates and 59 biscuits to begin with. To get one more chocolate, he is prepared to part with 14 biscuits (59—45), but to get the 7th, he is prepared to part with only 9 (45—36). By plotting the points representing the above combinations and assuming continuity we get the indifference curve CC'.

The table given above represents our scale of preferences shown on one indifference curve, but there can be so many scales, higher or lower, and corresponding to each new series there will be a separate indifference curve. For example, the child had an initial combination of 5 chocolates and 59 biscuits. But he may like to have more of both, say, 6 chocolates and 70 biscuits or 8 chocolates and 80 biscuits, and so on. These combinations represent higher total utility than the first combination and hence they will take the consumer to higher indifference curves. A combination of indifference curves C_1, C_2, C_3, C_4, is known as the indifference map. The indifference map is so arranged that curve C_2 represents higher total utility (and hence a preferable position) than C_1; C_3 represents higher total utility than C_2, and so on.

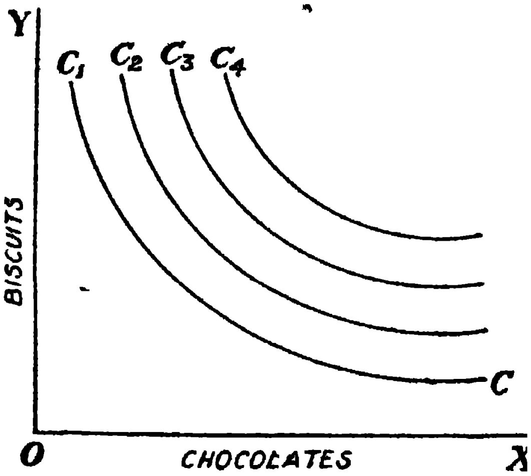

Fig. 11.

The Consumer's Equilibrium. The indifference curves represent the psychological preferences of the consumer which are independent of his income and the prices of the commodities under consideration. To know the actual purchases that the consumer will make, we have to bring in the total expenditure to be incurred on the two commodities as well as their prices. We first of all draw a price line, the slope of which measures the ratios of the prices of the two commodities. The price line is drawn on two assumptions:

(1) The total amount of expenditure to be incurred on the two commodities together remains constant; and

(2) The prices of the two commodities remain constant.

Going back to our favourite child, let us assume that he has 120 units of money to spend on biscuits and chocolates. Let the price of a biscuit be 1 unit of money and the price of a chocolate be 12 units of money. If the child spends the entire money on biscuits, he will have 120 biscuits and 0 chocolates. If he spends the entire money on chocolates, he can buy 10 chocolates. By joining the two points, we get the price line PQ, the slope of which measures the price ratio of the two commodities (which is assumed to be constant and hence the price line is a straight line). The above two positions were the cases of extreme combinations. Actually, however, a prudent

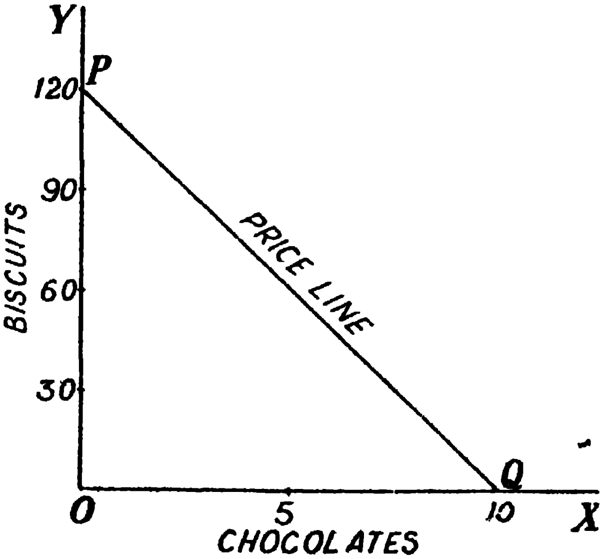

Fig. 12.

consumer likes to have a mixed combination. But the point is whatever the combination, the point of equilibrium will be on the price line because given the prices of the two commodities and the total expenditure to be incurred on them, any possible position of equilibrium must lie on the price line PQ. There alone the total expenditure allotted for the two commodities will be fully incurred.

To get the equilibrium position of the consumer, we have to super-impose the price line upon his scale of preferences. That we do in the adjoining diagram. The consumer is in equilibrium where the price line just touches (that is, it is a tangent to) one of the indifference curves. In the figure, price line PQ is a tangent to the indifference curve C_2 at the point T. Therefore, the equilibrium amount bought by the consumer is OM (=NT) of chocolates and ON (=MT) of biscuits. The consumer's equilibrium must lie on the indifference curve C_2, because it is the highest curve that we can attain with a fixed expenditure to be incurred on the two commodities. Curve C_3 lies out of his reach, while curve C_1 represents lower total utility than C_2. Hence within the constraint set by a fixed total expenditure, his total utility is maximum when he reaches the indifference curve C_2. One may ask why T and not any other point, say, R on the indifference curve C_2 be the equilibrium point. Though both R and T represent an equal total utility, the ratios of marginal utilities at R are not the same as the price ratios of the two commodities. So long as the two ratios diverge there is an advantage to the consumer in re-allocation of his expenditure. In equilibrium

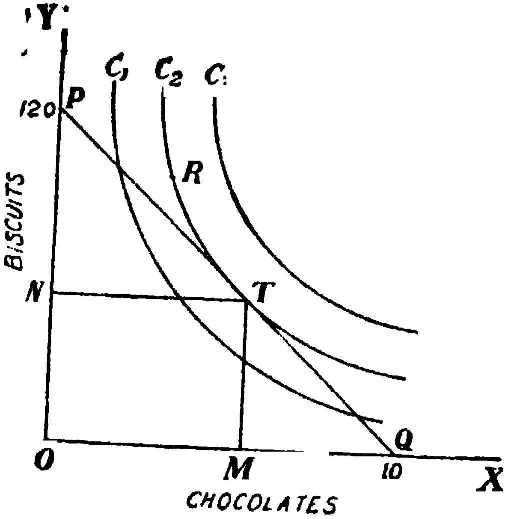

Fig. 13.

$$\frac{\text{Marginal utility of X}}{\text{Marginal utility of Y}}=\frac{\text{Price of X}}{\text{Price of Y}}.$$

Now T alone can be called a point of equilibrium because at that point alone the ratio of the two marginal utilities (given by the slope of the indifference curve at T) equals the price ratio of the two commodities.

Thus tangency between the price line and an indifference curve gives us the equilibrium position for the consumer and it implies that in equilibrium

$$\frac{\text{Marginal utility of X}}{\text{Marginal utility of Y}}=\frac{\text{Price of X}}{\text{Price of Y}}.$$

4. Superiority of Indifference Curve Analysis to the Marshallian Demand Analysis.

The indifference curve analysis is considered to be superior to the Marshallian demand analysis in the following respects: (1) One advantage claimed for the indifference curve analysis is that we can study the problem of consumer's choice without assuming that utility can be cardinally measured. With the help of indifference curve analysis, it is enough to know that a consumer prefers one combination to another, while in the case of Marshallian analysis we have also to know by how much is one combination preferred to the other in order to build up a theory of consumer's behaviour. Since utility is immeasurable, the indifference curve analysis is superior to the Marshallian analysis as it does not require the assumption of measurability of utility.

(2) We get a more generalised theory of demand with the help of indifference curve analysis than with the Marshallian utility analysis. The Marshallian analysis suffers from the defect that it works on the assumption that the marginal utility of money to the consumer remains constant and hence the only effect of a price change is to alter the terms at which one commodity is exchanged for another. However, the result of a price change is twofold : first to alter the real income and second to change the terms at which one commodity is to be exchanged for another. When the price of a commodity falls, it means that the consumer can buy the same amount of that commodity at a lower cost to him and hence there is a rise in his real income—this is called the *income effect* ; second, with a fall in the price of one commodity, the terms of exchange between this commodity and other commodities become tilted in favour of this commodity and hence its demand will increase—this is the *substitution effect* of a price fall. Hence a given change in price has two effects on the quantity demanded—one is the income effect and the other is the substitution effect. The Marshallian analysis being based on the assumption that marginal utility of money remains constant rules out the income effect and hence suffers from a lack of generality.

We give below a diagrammatic representation of the income effect and the substitution effect :

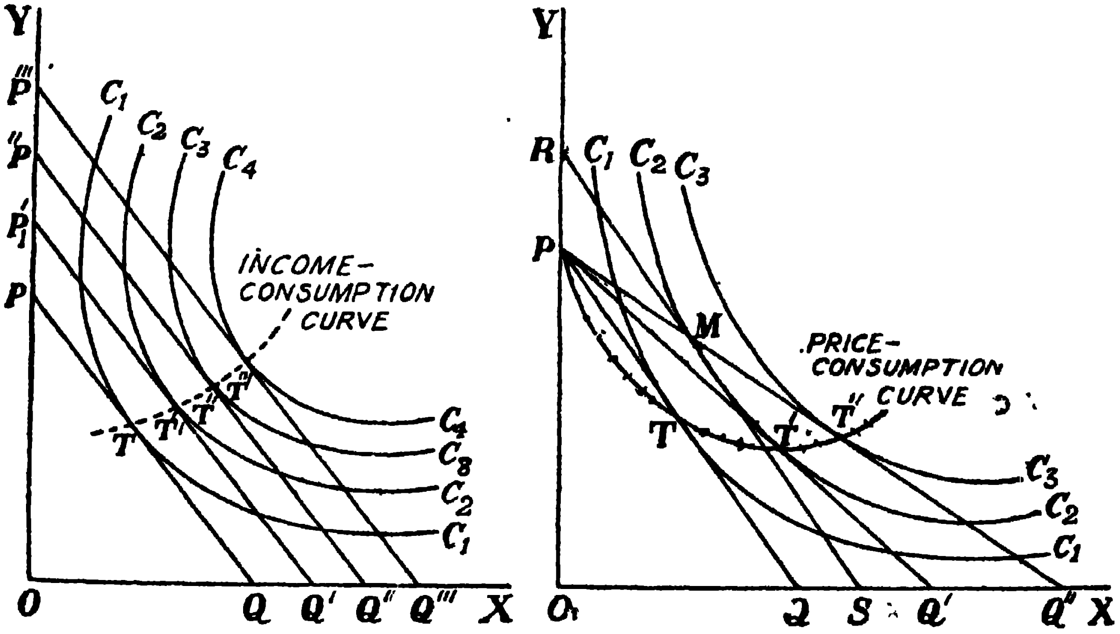

Fig. A.
Income-consumption curve.

Fig. B.
Price-consumption curve.

Fig. 14.

If the prices of the two commodities remain constant and money income of the consumer goes up, this will be represented by drawing a new price line to the right and parallel to the original line (Fig. A). Originally the consumer's equilibrium was at T, but with a given rise in money income represented by the new price line P'Q', he moves to a higher indifference curve C_2. If his money income rises still more, the new price line is P"Q" and the new position of equilibrium is on the indifference curve C_3 at the point T". By joining the points T, T', T", T"', we get the *income-consumption curve,* which traces the effect on the consumer of changes in his money income (prices of the two commodities remaining constant). Normally, when a consumer's income rises, he is likely to purchase more of the things that he purchased before unless a particular commodity happens to be an inferior product in his scheme of evaluation.

The price consumption curve (Fig. B) traces the effect of a change in the price of a commodity on its consumption. In this Figure, price line PQ' represents a lower price for X than is represented by the price line PQ (that is, if the consumer were to spend his entire income on commodity X, he will be able to purchase OQ' in place of OQ when the price of X falls), PQ" represents a still lower price of X. The consumer's equilibrium in the second position is at the point T', where the new price line PQ' is tangent to an indifference curve C_2. Similarly if price of X falls still further, the new position of equilibrium is at the point T". By joining the points P, T, T', T" we get a price consumption curve.

(The indifference curve analysis helps us to see that the price effect is composed of an income-effect and a substitution-effect.) Let us take the case where the new price line is PQ' and the consumer is in equilibrium position at the point T'. This is equivalent to a movement from T to M (the income-effect) and a movement from M to T' under the influence of substitution effect.

(3) Since the indifference curve analysis does away with the Marshallian assumption that along the demand curve the marginal utility of money income remains constant, it opens up new possibilities for generalising the concept of consumer's surplus, a line of thought developed by J.R. Hicks.

5. **Marginal Rate of Substitution.** How much of one commodity is substituted for how much of another or at what rate do we substitute one commodity for another? The answer is afforded by the "Marginal Rate of Substitution"—an idea introduced by Dr. Hicks and Prof. R.G. Allan[1]. Suppose A has sweets and B has fruit, and the two wish to exchange. The ratio of exchange will be the amount of one commodity, sweets, that will be given in exchange for the other, fruit. But exchange will take place only if the ratios or marginal utility of the two commodities are different for A and B. Unless the ratios of marginal utilities are different, exchange cannot take place. This ratio has been called the Marginal Rate of Substitution. In Hicks's words, "We may define the marginal rate of substitution of X for Y as the quantity of Y which would just com-

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[1] Hicks—*Values* and *Capital* (1946), Ch. I, p. 20.

pensate the consumer for the loss of marginal unit of X". It is really marginal utility of X in terms of Y. In the indifference schedule given in Section 3, the child is prepared to accept one more chocolate (3 instead of 2) and part with 21 biscuits (93 instead of 114). The marginal rate of substitution is 1 : 21. Next he is prepared to sacrifice 18 (93—75) biscuits for one more chocolate and the rate of substitution is therefore 1 : 18, and so on. The marginal rate of substitution is always decreasing.

The marginal rate of substitution enables a consumer to substitute some units of one commodity for some units of another till he reaches the equilibrium position, *i.e.*, the position of maximum advantage. It is pointed out "that an individual can only be in equilibrium with respect to the system of prices in operation at any one moment if the ratio of prices of any two goods equals his marginal rate of substitution between them, for otherwise, at that particular market rate, it would be to his advantage to substitute a portion of one good for an equal value of another."[1]

The marginal rate of substitution can be ascertained thus :—Consider the table in Section 2, Chapter IV. It is assumed that the marginal utility of money is constant. Suppose marginal utility of money is equal to 30 units of satisfaction per rupee. If our hypothetical consumer consumes three apples instead of two, the total utility increases from 38 units to 53 units, *i.e.*, an increase of 15 units. This is equivalent to money expenditure of 8 as. (30 units=one rupee, 15 units=8 as.). This is the marginal rate of substitution. "The marginal rate of substitution is the sum of money which will afford the same satisfaction as one unit of the commodity in question."[2] Or we might say that the price of a commodity is equal to the marginal rate of substitution of that commodity for money. So long as the market price is less than this marginal rate, it is obviously to the advantage of the consumer to increase his consumption of the commodity.

We may well distinguish the Marshallian conception of utility from the Paretian notion. Marshall thought of the intrinsic properties of the commodity on account of which it gives satisfaction. It has no reference to any other commodity. It is a conception of absolute utility, whereas Pareto's idea is relative. He regards utility of a commodity in terms of the units of some other commodity required to compensate for the loss of the commodity. Thus the marginal rate of substitution is based on the Paretian conception of utility. It is more scientific because it avoids the necessity or possibility of a quantitative measurement of utility. In this respect the concept of indifference curve is superior to the utility concept.

6. Practical Importance of the Law of Substitution. The law of substitution has a very wide application. It is applicable to the utilisation of time, distribution of assets in various forms and the allocation of resources among various uses. It also applies to the use of money now and its use in the future, *i.e.*, in spending in the pre-

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1. Briggs and Jordan—*Text-Book of Economics* (1935), p. 94.
2. Boulding, K. L.—*Economic Analysis* (1949), p. 618.

sent and saving in the future. The law is applicable to all branches of economic theory.

It applies to Consumption. Every consumer, if he is wise, wants to get maximum satisfaction out of his limited resources. In arranging his expenditure to that end he must substitute the thing of greater utility for one possessing less utility till marginal utilities are equalized. In this way consumers' satisfaction is maximized.

Its application to Production. To the businessman and the manufacturer the law is of special importance. He works toward the most economical combination of the factors of production employed by him. For this purpose, he will substitute one factor for another till their marginal productivities are made the same. In case he finds that marginal productivity of a factor, say labour, is greater than that of capital, it will pay him to substitute one for the other. In this way he will be able to maximize his profit.

Its application to Exchange. In all our exchanges this principle works, for exchange is nothing else but substitution of one thing for another. The substitutional character of our exchange is sufficient to bring home to us the very great importance of this basic economic principle.

This principle has an important *bearing on the determination of value.* When there is scarcity of a commodity, the Law of Substitution comes to our aid. We start substituting the less scarce goods for the more scarce ones. The scarcity of the latter is thus relieved, and its price comes down.

Its application to Distribution. In distribution, we are concerned with the determination of the various agents of production, *i.e.*, determination of rent, wages, interest and profit. These shares are determined according to the principle of marginal productivity. The use of each agent of production is pushed by the entrepreneur to the margin of profitableness and the marginal product in each case is the same. In case it not the same, the Law of Substitution will come into play to equalize their marginal productivities. This is how the Law of Substitution proves useful in the field of distribution of the national dividend among the various agents of production.

Thus the law of substitution applies in all branches of economic theory. It has also got great practical importance.

7. **Limitations of the Law of Substitution.** Like other economic laws, this law too is a mere statement of a tendency. The actual expenditure of individuals may not conform to this law. It may be due to the following limitations :—

(1) The Law of Substitution involves very careful calculations of the expected satisfaction and its comparison with the amount of money spent as well as with the satisfaction which may be derived by spending the same amount of money in some other direction. But how many of us are capable of making such fine calculations ? How many of us have the patience and the ability to do it ? Are we all so rational and calculating ? The fact is that most of our expenditure is governed by habit. There is not much of conscious calculation and careful weighing of the utilities.

Only in the case of big expenditure, a prudent person goes through a certain amount of thinking. Here we may take it that it does roughly conform to the Law of Maximum Satisfaction.

The utmost that we can say is that all rational and prudent persons are expected to act upon this law consciously or unconsciously. As Chapman puts it, "We are not, of course, compelled to distribute our incomes according to the Law of Substitution or Equi-marginal Expenditure, as a stone thrown into the air is compelled, in a sense, to fall back to the earth ; but as a matter of fact, we do in a certain rough fashion, because we are reasonable."[1]

(2) Ignorance of consumers imposes another limitation. They may not be aware of other useful alternatives. Hence no substitution takes place and the law of substitution does not operate.

(3) People are sometimes slaves of custom or fashion and are incapable of rational consumption. Without being rational and calculating, a consumer cannot substitute one thing for another. This is another limitation on the law.

(4) Another limitation arises from the fact that goods are not divisible into small bits to enable consumers to equalise marginal utilities. In actual practice, therefore, the marginal utilities cannot be equalised. The law remains only on a theoretical plane.

(5) There is no definite budget period in the case of individuals. Even if there is a fixed accounting period, the application of this principle is rendered difficult by the varying degrees of durability of the goods consumed. A durable good is available for consumption in several succeeding accounting periods. It is not therefore easy to bring it into account of income and expenditure of a particular accounting period to see if satisfaction has been maximised during that period.

(6) Finally, the law of equi-marginal utility will be satisfied only if there is a proportionality between marginal utilities of goods consumed and their prices. Thus

$$\frac{\text{M.U. of X}}{\text{Price of X}}=\frac{\text{M.U. of Y}}{\text{Price of Y}}=K.$$

Unless $K=1$, the law will not be satisfied, and it is not necessary that a consumer should equate the M.U. of a commodity and its price.

8. Consumer's Preferences. In the foregoing section we have referred to what the consumer might or might not do. A word about consumer's choices may be appropriate here. In the world we live in, choice is inevitable. This is due to the obvious fact that our resources in time, energy and money are limited, whereas the calls on them are unlimited. We are continually being called upon to choose between the things we can possibly buy or possibly do. Such decisions show our preferences. In order to derive maximum satisfaction out of his resources, a consumer must arrange the goods he wishes to buy in order of preference. In other words, he must have "a scale of preferences".

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[1] Chapman, S.—*Outlines of Political Economy*, p. 48.

In Economics, we assume that consumer's choices are made after due deliberation and careful calculations of benefit and sacrifice. We assume, therefore, that the consumers are not carried away by impulse or forced by habit or custom or tied down by inertia. We assume that every consumer spends sufficient time in thinking whether he should buy a commodity or not or how much he should buy. He also does not shirk the labour of finding out the cheapest shop or of striking a good bargain. We assume this, because otherwise economic generalisations would be impossible. The economists, then, will not be able to analyse the tendencies in the various economic spheres.

But we should not be blind to the fact that consumer's choices are not actually rational. Most of the people buy things through force of habit or in sheer imitation. They are lured by attractive advertisements. Few take the trouble of even inquiring about the prices. Many purchases are made in a light-hearted fashion. There is no proper budgeting. We seldom weigh in our mind whether we should really go in for a thing or not. There are only a few honourable exceptions. It would be also unrealistic to suppose that the consumers are completely conscious in their minds about their scale of preferences or that this scale itself is complete and consistent.

However, whatever the nature of consumer's choices, they are the determining factor in our economic system.

CONSUMER'S SURPLUS

9. Meaning. We owe to Marshall the introduction of the concept of consumer's surplus. His idea was to give a definite expression to something with which we, as consumers, are all familiar.

Even in our ordinary purchases, there is some consumer's surplus since we may be prepared to pay more than we actually pay. But consumer's surplus is to be found especially in the purchase of commodities, which are useful and cheap *e.g.*, post card, newspaper, match box, salt, etc. For them we are prepared to pay much more than we actually pay if the alternative is to go without them. The extra satisfaction that we derive is called consumer's surplus.

In the words of Marshall, "*The excess of the price which he (i.e., consumer) would be willing to pay rather than go without the thing over that which he actually does pay is the economic measure of this surplus satisfaction. It may be called Consumer's Surplus*[1].

In short, *consumer's surplus* is what we are prepared to pay *minus* what we actually pay. As will be clear from the following section, the consumer's surplus is measured by the difference between total utility and the amount spent.

10. Consumer's Surplus and the Law of Diminishing Utility. The concept of consumer's surplus is derived from the law of diminishing utility. (Refer to the table in Section 2, Chapter IV.)

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[1] For later refinements in the concept of Consumer's Surplus, reference may be made to Hicks's article on "The Generalized Theory of Consumer's Surplus" in the *Review of Economic Studies* (1945-46), Vol. XIII (2), No. 34.

Suppose the price in the market is 6 pice per apple. The consumer will purchase as many apples as make his marginal utility equal to the price. Thus he will purchase 5 apples and pay for each six pice (one unit of utility is supposed to be one pice worth). In this way he will spend in all 30 pice. But his total utility from 5 apples is measured by 70 pice. He thus gains a consumer's surplus measured by 40 (70−30) pice. This is so because he would have paid 70 pice rather than go without apples but he actually pays only 30 pice. If the price rises to 11 pice, he will purchase 4 apples and pay 44 pice, whereas the total utility is worth 64 pice. This will give him a consumer's surplus measured by 20 (64−44) pice, and so on.

Below is given the diagrammatic representation of **consumer's** surplus :—

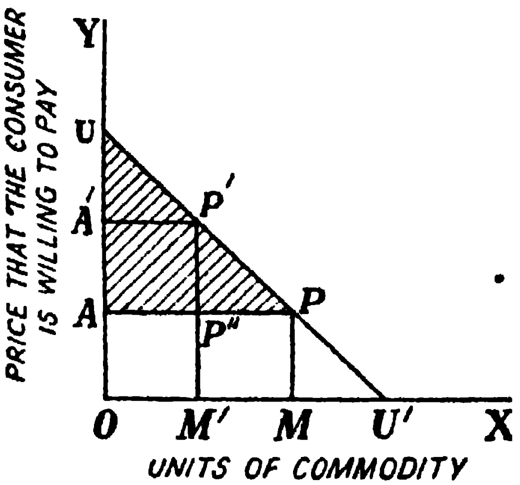

Fig. 15

Along OX are measured the units of the commodity to be purchased, and along OY is measured the utility in terms of money, which means the price that the consumer is willing to pay rather than go without a particular unit of the commodity.

If the market price is PM, the consumer will extend his purchase up to the Mth unit. He will purchase OM quantity. This is so because for this amount his marginal utility is equal to the price. But his marginal utility for the earlier units is more than PM. For M'th unit, for instance, his marginal utility is P'M', but he only pays the market price PM (=P"M') for this unit as for others. He thus obtains an excess of utility for the M'th unit equal to P'P". This is consumer's surplus from this unit. Similar surplus arises from the purchase of other units. The total consumer's surplus thus derived by him when OM units are purchased at PM price is shown by the shaded area UAP. If the market price rises to P'M', he will purchase only OM' quantity, and the consumer's surplus will fall to the smaller tringle UA'P'.

The consumer's surplus arises from the fact that some purchasers are marginal while others are not. The intra-marginal purchasers enjoy a surplus. Similarly, a consumer enjoys a surplus on intra-marginal purchases, *i.e.*, purchases which are not marginal.

In the calculation of consumer's surplus, we assume a perfect market, *i.e.*, the same price for all units. In case, however, the consumers were subjected to price discrimination, *i.e.*, higher price for earlier units and lower for the successive ones, then he would be forced to pay more for the same quantity of the commodity as compared with the perfect market. Thus purchases in the perfect market yield surplus over purchases in the discriminating market.

11. Can Consumer's Surplus be Measured? It looks as if it can be. We have explained above that consumer's surplus is, simply the difference between what we are prepared to pay rather than go without and what we actually pay. Or it can be ascertained by the following formula :—

Consumer's surplus=Total utility—Price × Number of units purchased, (*i.e.*, the total amount spent).

How simple it looks !

The measurement of consumer's surplus, however, is not so simple as that. There are numerous difficulties which stand in the way of the precise measurement of consumer's surplus :

1. *A complete list of demand prices is not available.* We are aware of a part only of the demand schedule. As we do not know what prices we are prepared to pay for every one of the units, the whole of the consumer's surplus cannot be ascertained. In actual life, however, we are concerned with that part of the demand schedule with which we are fairly familiar. Reactions to small changes in prices are fairly well known. In real life, we are not concerned with hypothetical scarcity prices, or unimaginable low prices.

2. Consumer's surplus, in the case of necessaries of life and conventional necessaries, is indefinite and immeasurable. In case of necessaries of life as well as conventional necessaries, there is no positive satisfaction. In their case there is only removal of pain rather than giving of pleasure. Patten calls it "pain economy." Only when the necessaries of life have been satisfied can there be any idea of consumer's surplus. It is to this stage which Patten calls "pleasure economy," that consumer's surplus belongs.

3. *Consumer's circumstances vary.* Some consumers are rich and others poor. A rich man is prepared to pay much more for a thing than go without. This difference in the consumer's circumstances makes the measurement of consumer's surplus difficult and inexact. This difficulty is met by the idea of average. When there is a large number of purchasers, rich and poor, the variations in individual circumstances may be ignored.

4. *Consumers differ in sensibilities.* Every consumer has his own tastes and sensibilities. Some desire a commodity more ardently than others, and are, therefore, prepared to offer more. This difficulty is also met, as in the above case, by the idea of average. When we deal with consumers in the bulk, individual tastes and sensibilities may be supposed to cancel themselves out.

5. *Marginal utility of money changes.* As we go on buying a commodity, less and less amount of money is left with us. Hence the marginal utility of each unit of money increases. But, when we measure consumer's surplus, we do not make any allowance for this change in the marginal utility of money. In reply to this objection, we may point out that in actual practice only small amounts of money are spent on the purchase of individual commodities. The changes in the marginal utility of money are, therefore, negligible.

6. There is the further difficulty that, with every increase in the purchase of a commodity, the urgency of the need for the earlier purchase is diminished and their utility decreases. This decrease in the utility of earlier units is not taken into account when calculating

the consumer's surplus. To measure consumer's surplus precisely, it is suggested that the earlier parts of the list of demand prices should be continually redrawn. This objection would have been valid if the utility written against each unit were the average, and not additional utility. Only the average changes at every step and not additional utility. (Refer to table in Section 2, Chapter IV). If the consumer buys two apples, the average is 19, in case of three it is $\frac{53}{3}$, and in case of four it is 16, and so on. Thus the average no doubt changes, but the marginal or additional utility will not have to be altered whatever the number of units purchased.

7. Then there is the difficulty arising out of the presence of substitutes. How calculations of utility, in their case, are upset or rendered difficult has been already explained.[1] To meet this difficulty the two substitutes, say tea and coffee, can be regarded as one commodity, as suggested by Marshall.

8. *Commodities used for distinction.* In such cases, *e.g.*, diamonds, the fall in price will not lead to increase in demand. When such commodities become cheap, they no longer confer distinction on the user. The demand for them, therefore, may fall off. Hence a fall in price in such cases will not increase consumer's surplus.

We may, therefore, conclude by saying that the exact measurement of consumer's surplus is impossible. Even so the concept of consumer's surplus is not a useless one. In practical life, whether in business or in public finance, it is always possible to have a rough and workable idea about the measure of consumer's surplus.

12. Criticism of Consumer's Surplus. The concept of consumer's surplus has been subjected to scathing criticism by economists like Cannan, Nicholson, Robinson and Davenport. Its scientific character has been attacked on the ground that is is based on assumptions which are unwarranted. Its measurement assumes that utilities are capable of exact measurement and can be translated in terms of money. It further assumes that different units of the commodity have different utilities. Moreover, the utility of each commodity is regarded as something absolute which it is not. It is also assumed that the marginal utility of money remains constant. While we go on spending money, the utility of each unit of the money left with us increases, while the marginal utility of the commodity falls. This makes the calculation of consumer's surplus still more difficult.

Hicks has, however, given a representation of consumer's surplus with the help of indifference curves which makes the concept independent of this assumption.[2]

In the case of necessaries and conventional necessaries, it seems to have no application, for in such cases the consumer will be willing to pay any amount rather than go without. The utility is infinite.

It is, therefore, said that the whole idea of consumer's surplus is *hypothetical, imaginary and illusory.* A man cannot always say what he will be willing to pay rather than go without a thing. This inquiry seldom presents itself to him in the market. The price in the market is a fact which he must accept ; what he is called upon to decide is how much he will buy. It is further pointed out that if there is a surplus, the consumer will be induced to buy more and more of that commodity till the surplus disappears. It simply cannot exist.

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[1] Chapter IV, Section 12.

[2] Hicks, J. R.—*Value and Capital* (1948), pp. 38-40.

The criticism is indeed damaging. From the strictly scientific point of view, the validity of none of these objections can be questioned. The main point of criticism is that it is incapable of precise numerical measurement. This may at once be conceded. But it cannot be denied that something like this does exist in real life. Rather than go without a thing, we are prepared to pay more than what we actually pay. In this way, we do enjoy a surplus of satisfaction, though we cannot say exactly how much. It certainly tells us that a system of uniform market price does yield a surplus of satisfaction to some consumers who would have been able and willing to pay more if the alternative was to go without. In real life, the transactions are of a type which yield a surplus satisfaction to the consumers.

13. Importance of the Concept of Consumer's Surplus.

Although incapable of precise measurement, the concept of consumer's surplus has a great practical utility and theoretical importance :

(1) *Conjunctural importance.* It enables us to *compare the advantage of environment and opportunities, or conjunctural benefits.* A person getting Rs. 200 in Delhi can enjoy better amenities of life than a person getting Rs. 300 in a town more remote from the centre of civilisation. It also enables us to compare the economic conditions of the people at different times. The larger the consumer's surplus the better off are the people.

(2) *Importance in public finance.* The Finance Minister considers, while proposing fresh taxation, how much the people are willing to pay for a thing and how they will be affected by a rise in price resulting from the imposition of a tax. Where the consumers are enjoying a surplus, there is scope for taxation, for the people are willing to pay more. The rise in the price will not affect the demand much.

Imposition of a tax or granting of a bounty is bound to affect consumer's surplus.[1] But the effect will differ according as the industry is subject to the law of constant return, diminishing return or increasing return. In the case of constant return, the consumer's surplus will be diminished by more than the gross receipts of the State. "On that part of the consumption which is maintained, the cunsumer loses what the State receives ; and on that part which is destroyed by the rise in prices, the consumer's surplus is destroyed and there is no payment to the State." Conversely, the gain of consumer's surplus in the case of a bounty is less than the bounty itself. Where the law of diminishing returns operates, the gross receipts from the tax may be greater than the resulting loss of consumer's surplus. A bounty may increase consumer's surplus. In the case of increasing returns, the tax is more injurious and the bounty more beneficial. A tax will diminish consumer's surplus more than what it brings to the State and a bounty will increase the consumer's surplus more than the amount paid by the State.

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[1] Marshall, A.—*Principles*, Book V, Ch. XIII.

(3) *Importance in theory of monopoly value.* Similarly, a businessman or a monopolist will find that he can easily raise prices if the commodity is yielding surplus of satisfaction to the consumers. The consumers are willing to pay more, if need be. As a matter of expediency, however, the businessman will not raise the price so much as to absorb the whole of the surplus. He will not drive a hard bargin to that extent. He will like to cultivate and retain the goodwill of his customers and follow, therefore, a policy of compromise.

(4) *Distinction between value-in-use and value-in-exchange.* We know that market value of a commodity is different from its utility or value-in-use. Commodities like salt and match box have great value-in-use but a very small value-in-exchange. The consumer's surplus from such commodities is very large for we are prepared to pay much more for such commodities than we actually pay. Consumer's surplus depends on the total utility, *i.e.*, value-in-use, whereas the policy or value-in-exchange coincides with marginal utility. The doctrine of consumer's surplus, therefore, clearly brings out the distinction between value-in-use and value-in-exchange. It is large where the value-in-use is large even though the value-in-exchange may be small.

(5) *Consumer's surplus measures the benefits from international trade.* By entering into trade with another country, we import certain articles which happen to be cheaper. Before we imported them, we were paying more for similar commodities. They yield a surplus of satisfaction which is measured by the excess of what we would have paid for them over what we have actually paid. The larger this surplus, the more beneficial is the international trade.

14. Sovereignty of the Consumer[1]. Before we close this chapter, we might discuss whether consumer is the king. We have been discussing his choices and his scale of preferences. Is he really a sovereign who chooses? Under capitalism or the system of free competition, the consumer has been compared to a king. The entire productive machinery is supposed to work under his sovereign sway. His whims, prejudices and desires seem to rule the world of production. The entrepreneurs of modern industry are his bond slaves and so many servants to carry out his commands. If the consumer is pleased, the entrepreneurs are happy and prosperous, and, if the consumer is dissatisfied, the entrepreneurs' fate is sealed. Thus he is said to be the monarch of all he surveys.

In the past, the consumer's rule was manifest. The consumer placed the order, say for shoes, clothes, etc., and the maker simply carried out the order faithfully. The consumer got what he wanted. He was undoubtedly the king.

But the modern producer does not work to order. He anticipates it. It is the business of the entrepreneur to make a shrewd guess as to what would satisfy the consumer the most. But here again, the consumers' preferences exert their full weight. If the entrepreneur is not sufficiently intelligent to gauge rightly the requirements of the consumers, or if the prices fixed by him do not suit the pockets of the consumers, his goods will not sell.

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[1] *See* Benham, F.—*Economics.*

In a capitalist economy, such ventures will succeed as satisfy the consumers the most. "Universal consumption is something like universal suffrage ; it is a democratic means of control. The only qualification required for consumption is the possession of income with which to acquire the desired goods. In economic elections, a consumer casts as many votes as he has dollars to spend. If the economic electorate decides to spend its money for baubles instead of essentials, for shoddy goods instead of genuine articles, for things that are ugly instead of things that are beautiful, such things will be produced. Consumer's choice, whether it is wise or foolish, guides the operations of our industrial system. It is like closing an electric circuit and thereby turning on a current that sets the wheels of the productive mechanism into motion."[1] The rationale of all economic activity is the satisfaction of the consumer's wants.

15. Limitations on Consumer's Sovereignty. But the consumer is not so despotic a monarch as he is supposed to be. At best his case may be one of constitutional or limited monarchy. A constitutional monarch reigns but does not rule. There are some serious limitations on the authority of our sovereign, the consumer :

(*a*) The most important check on his authority arises from the size of his income. The things do not move according to his command unless he uses the money-whip. The consumer wants pure ghee but he has to be content with Dalda for lack of means to pay. The real wants of the consumers go unsatisfied under the present economic system, and only those wants can be satisfied which are expressed in money.

Further, the individual consumer does not count. It is only the combined demand which rules.

(*b*) The satisfaction of the consumer depends on the goods actually available in the market. There are physical limitations too. Actual production depends upon technical knowledge at the moment and development of technique may lag behind consumers' desires. We want noiseless trains but we must wait till the technique develops. Consumers' preferences are generally ahead of what is available at the moment.

(*c*) High pressure salesmanship and persistent advertisement modify the real desires of the consumers. The propaganda machinery is directed to mould and to control consumers' tastes. They are thus induced to buy something different from what they would have purchased otherwise. Our sovereign, the consumer, is impotent and helpless. That businessman succeeds who does not merely satisfy the felt wants of the consumers, but who is able to direct the consumers' tastes towards his particular brand. Huge amounts are being spent on advertisement in every country. At every strategic corner on the road sides, on the railway platforms, on the trunks of trees and telegraph poles, on the houses and the trams, a consumer is faced with attractive advertisements.

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[1] Kiekhofer, W. H.—*Economic Principles, Problems and Policies* (1936), p. 652.

According to Ely, "Expenses in the United States for national advertising alone are estimated to average nearly 10 dollars for every man, woman and child. The cost of advertising in each issue of the *Saturday Evening Post* is nearly a million dollars."[1] Here is another estimate : "In the United States alone about half a million persons are normally employed in advertising and that nation's annual advertising bill runs from 1½ to 2 billion dollars."[2] These amounts are not being spent to please the consumer but to enrich the producer. Every rupee spent on advertisement and salesmanship is a nail in the coffin of the consumer's sovereignty. We do not agree with Benham when he says that a monarch may be advised and cajoled as to some of his activities even by his slaves, but he remains a monarch none the less. This is a case of nominal sovereignty, a very poor specimen of monarchy indeed.

Here is an evidence of the consumer's helplessness. "No doubt the public is spending a tremendous amount yearly—and it comes from those who can least afford it—for lamps that are both a fire and health hazard, for toasters that we dare not touch once they are heated up, for automatic irons that burn and destroy fine rayon goods when set for the lowest temperature, for curling irons, vibrators, massagers which are so poorly insulated that only a person totally ignorant to the potential shock of 110-120 volt supply would dare use such an appliance."[3] This is true of most lines of production.

(*d*) The monopolists too exercise control over the consumer. In modern times, there is a tendency towards combination or cartellisation, and a few firms or companies come to control production. They can easily dictate their terms to the consumers, who have no say in the matter of price or the range of production.

(*e*) Then, there is the Government control about which we have now become well acquainted. Even in normal times the government either prohibits or restricts the consumption of certain articles, *e.g.*, intoxicants. The Government can exert influence on the trends of production. Besides, the Government itself is the biggest consumer and is in a position to set the pace in the matter of price as well as the quality of goods produced.

(*f*) Consumer's own habits bind him and he is reluctant to make any departure from his set scales of consumption. The freedom to choose, therefore, is not exercised.

(*g*) Environments and conventions of society also exercise a restraining influence on the consumer's choice. Therefore, the unrestricted freedom of the consumer is a mere myth.

(*h*) The consumers are generally ignorant and do not know what is best for them. Their blind choice does not always accord with their self-interest. Lack of knowledge, therefore, is another hindrance in the way of exercise of the consumer's sovereignty. If the consumer is a giant, he is surely a blind giant.

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[1] Ely, R. T.—*Outlines of Economics* (1930), p. 145.

[2] Kiekhofer, *op. cit.* p. 154.

[3] Moore and others—*Modern Economics*.

(*i*) Production of standardised goods, irrespective of the individual tastes, is a conclusive proof that the modern economic system pays scant courtesy to the consumers' wishes. The consumers are bulked together and treated *en masse*, not like a king but a herd of sheep.

It is really very difficult to convince a poor villager or a factory hand that he is the sovereign of all he surveys and that factories are working, trains and ships are moving and the businessmen sitting at their shops or running to and fro in the market—all trying to serve him and satisfy him rather than line their own purses.

The fact is that neither consumers nor producers alone are sovereign. Economic prosperity of a country lies in a proper balance between consumption and production. In the words of Ely, "Progress is dependent on alert and responsive consumers as well as on prudent and efficient producers. Sluggish consumers, sluggish producers."

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CHAPTER VI

DEMAND

1. **Demand**. It is necessary to distinguish between demand and desire or need. A sickly child *needs* a tonic ; a peon *desires* to have a radio set. But such needs and desires do not constitute demand. When, however, the person desiring is *willing and able to pay* for what he wants, the desire is changed into demand. In the words of Chapman, "*Demands are the quantitative expressions of preferences.*"

Demand is always *at a price*. "*The demand for anything at a given price is the amount of it which will be bought per unit of time at that price.*"[1] It simply means how much a person will be willing to buy of a commodity at a certain price. At another price he will, of course, buy a different quantity, more at a lower price and less at a higher price. To speak of demand without reference to price is meaningless. Also, *the demand is always per unit of time*—per day, per week, per month or per year.

The demand price is, from the point of view of the seller, the average revenue or income he expects to earn from the sale of that unit. Thus demand price is identical with average revenue.

It may be noted that there is no isolated demand. Things are demanded as part of a system. For instance, a student does not want books alone but books, stationery, etc. We demand things in groups. The standard of living of a person governs the system of demand.

2. **Demand Schedule**. A list of the quantities purchased or demanded at various prices is called a Demand Schedule. Demand Schedule (curve) represents a *functional relationship* between price and the amount demanded. The following is the Demand Schedule of an individual A for apples .:—

Price per dozen Rs.	Quantity demanded in dozens
7	1
6	2
5	3
4	4
3	6
2	8
1	10

The law illustrated by the demand schedule has been called the *Law of Diminishing Consumption* as the price rises.[2]

It is necessary to take note of the determinants of an individual consumer's demand. The main factors which determine the demand of an individual are : (*i*) The income of the individual ; (*ii*) his tastes or preferences; (*iii*) the price level; (*iv*) prices of substitutes; and (*v*) social conventions.

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[1] Benham, F.—*Economics* (1943), p. 36.

[2] Samuelson, P. A.—*Economics* (1948), p. 448.

The Demand Schedule for the whole market is arrived at by adding the quantities demanded by all the prospective purchasers at varying prices. Suppose a market consists of only five buyers (with sellers) called A, B, C, D, and E. Suppose their Demand Schedules for apples are as given below :—

Price per doz.	Quantity demanded in dozens by :					Tot
Rs.	A	B	C	D	E	
7	1	3	0	0	0	4
6	2	4	1	0	0	7
5	3	5	3½	½	0	12
4	4	5½	4	1	½	15
3	6	7	5	3	2	23
2	8	8	6	4	3	29
1	10	11	8	5	4	38

The last column gives the total demand for the market as a whole. The first and the last columns, put together, constitute the demand schedule of the market.

In preparing the market demand schedule, it is assumed that the conditions of demand, *viz.*, consumer's tastes, incomes and prices of other goods remain unaltered, and the only change is the change in price of that particular commodity. This, however, is seldom the case. All the same demand schedule is a fairly close approximation to reality.

It is, however, very easy to draw an imaginary schedule like the above, but it is a problem to prepare the *actual* demand schedule of a person. To prepare one for the market is a sheer impossibility. It is not always easy for people to say how much they would buy at different prices. At best it will be a mere guess work.

Market demand schedule is more continuous and smooth as compared with the individual demand schedule. The individual may behave in an erratic manner. But these eccentricities or angularities are smoothed out when we consider individuals in the mass.

It should be carefully noted that the market demand schedule is not merely the sum-total of individual demands. One reacts on the other. Thus the market schedule refers to aggregate behaviour of the market rather than mere totalling of individual demands.

Time exerts a strong influence both on individual and market demand schedule. In the first place, if more time is given to the consumer to adjust his demand to the change in price, it will make his demand more elastic. Secondly, the longer the period under consideration, the greater is the influence of the future or anticipated prices.

Although it is difficult to prepare the exact demand schedule, yet it does not mean that the demand schedule serves no purpose. We may not be able to give a *complete* list of quantities we shall buy at different prices, but, within certain limits of the prevailing price, we can always make a good guess as to how much we shall buy if the price changed, and that is all what matters.

Considered in this light, the demand schedule ssumes a great importance. The Minister of Finance has to estimate to what extent the people will curtail their purchases in case the imposition of a tax raises the price of a commodity. The preparation of the budget would be impossible without such calculations. The monopolist, too, in search for the maximum monopoly net revenue, will have to consider consumers' reactions to the variations in price.

3. **The Demand Curve**. A demand schedule can be represented in the form of a curve, called the Demand Curve. The market demand curve of apples is given below :—

Quantities demanded (in dozens) are measured along OX and the prices (in rupees) along OY. If perpendiculars are drawn from points indicating quantities on OX and corresponding prices on OY, the meeting points of these perpendiculars will be on a curve. This is the demand curve for apples under the conditions represented by demand schedule.

It will be seen that the curve slopes from left to right (like the utility curve) showing that as price falls quantity demanded increases, and conversely, as price rises quantity demanded decreases. The demand curve represents a stationary state or a fixed situation. It cannot indicate changes over a period of time. You take a certain price and try to assess the demand at a given price. Other relevant facts are also supposed to be given.

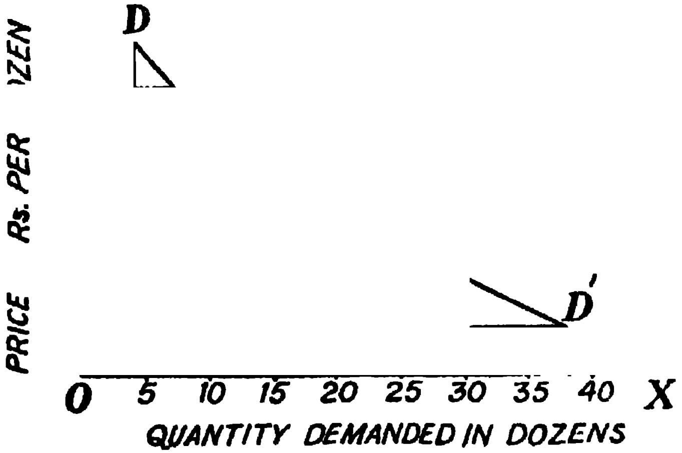

Fig. 16

It is essential to understand the assumptions underlying the demand curve as drawn above:

(*i*) It is assumed that the consumers' tastes do not undergo any change in fashion or on account of season.

(*ii*) It is also assumed that consumers' incomes remain the same.

(*iii*) The prices of other goods in which the consumers may be interested are also supposed to remain constant.

(*iv*) Continuity or infinitesimal variations are assumed in price-demand relationship, although sometimes demand may vary by jumps while price varies by series of small changes. The demand curve ignores these 'discontinuous' changes.

(*v*) It is further assumed that demand can be varied in infinitesimal units of a commodity which is an unreal supposition. In the case of indivisible commodities, the demand curves will not be smooth and continuous; they will be discontinuous.

(*vi*) It is assumed that no individual buyer is in a position to influence price. He must accept the price as given and regulate his purchases accordingly. In other words, we assume perfect competition and absence of monopoly.

4. Why does Demand Curve slope downwards? Generally the demand curve slopes downwards. It is in accordance with the law of diminishing utility. The purchases of most of us are governed by this law. When the price falls, new purchasers enter the market and old purchasers will probably purchase more. Since this commodity has become cheaper, it will be purchased by some people in preference to other commodities. Only in a curve of this slope shall we find shorter price lines cutting longer pieces in the quantity-axis. If the law of diminishing utility is true—and it is generally true—the curve must slope downward, for only then the phenomenon of increasing demand with falling prices can be represented.

There are three obvious reasons ; why people buy more when the price falls :

(*i*) A unit of money goes farther and one can afford to buy more.

(*ii*) When a thing becomes cheaper one naturally likes to buy more.

(*iii*) A commodity tends to be put to more use when it becomes cheaper. Thus the old buyers buy more and some new buyers enter the market. The cumulative effect is an extension of demand when price falls.

But let us go a bit deeper and try to find out *why the demand increases when the price falls*[1], other things being equal. Benham has answered this question in this manner. Having a limited amount of money at his disposal, every consumer wants to get the maximum satisfaction therefrom. Knowing his own scale of preferences he will, according to the law of substitution and equimarginal returns, so arrange his expenditure that he gets equal marginal utility from the last anna that he spends in different ways. He will keep to this arrangement if the prices remain the same. But if the price of a certain commodity included in his assortment of goods and services falls, then he must make a corresponding alteration in his scheme of expenditure. By the fall in price, divergence has been created between the marginal utility and price and this must be rectified. This can be done by buying more of the commodity, thus bringing its marginal utility to the level of the price. That is why people buy more when the prices fall.

Exceptional Demand Curves. Sometimes the demand curve, instead of sloping downwards will rise upwards. In other words, sometimes people will buy more when the price rises. This can be represented only by a rising curve. Such occasions are very rare, but we can imagine some. These were first investigated by Sir Robert Giffen. The Giffen paradox holds that the demand is strengthened with a rise or weakened with a fall in price. Benham has mentioned four cases[2]: (1) In case a serious shortage is feared, people may be in a panic and buy more even though the price is rising. This is expectational rise in prices. (2) When the use of a commodity confers distinction, then the wealthy people will buy more when the price rises, to be included among the few distinguished personages. Conversely, people tend to cut their purchases, if they believe the commodity to be inferior. (3) Sometimes people buy more at a higher price in sheer ignorance. (4) If the price of a necessity of life goes up, the consumer has to readjust his whole expenditure. He may cut down his expenses on other food articles and in order to make up, more may have to be spent on this particular food, more of which will, therefore, be purchased in spite of its high price.

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[1] *See* Benham, F.—*Economics* (1943) pp. 42-3.

[2] *Ibid.*, pp. 47-8.

5. **The Law of Demand.** We are now in a position to formulate the Law of Demand which simply expresses the relation between quantity demanded and the price. It says that *demand varies inversely with price, not necessarily proportionately*. If the price falls, demand will extend, and *vice versa*. It can also be stated thus : "*A rise in the price of a commodity or service is followed by a reduction in demand, and a fall in price is followed by an increase in demand, if conditions of demand remain constant.*" Or, "At any given time, the demand for a commodity or service at the prevailing price is greater than it would be at a higher price and less than it would be at a lower price."[1]

The qualifying phrases "at any given time" or "the conditions of demand remaining constant" are very important. Demand is subject to several influences, which will be discussed presently, and the operation of any of those influences may counteract the law.

It may also be added that no proportionality in the change is implied. If the price falls by 10 per cent, it does not follow that the demand will increase exactly by 10 per cent. We can only say that the demand will increase when the price falls, but cannot say how much. This will depend on the elasticity of demand which we shall discuss shortly.

Limitations of the Law. There are, however, certain exceptions to the law of demand. There are cases when demand does not decrease when price rises, and *vice versa*. These cases are indicated by exceptional (upward rising) demand curves. (*See* Sec. 4 above). The law will hold good if the conditions of demand remain the same. The following conditions must be fulfilled if the law is to hold good[2]:—

(*i*) Consumers' tastes should not change.
(*ii*) Consumers' incomes should remain the same.
(*iii*) Prices of other goods should remain unchanged.
(*iv*) No new substitutes should have been discovered.
(*v*) No further changes in price should be expected.
(*vi*) The commodity is not one which confers distinction.

These conditions may not remain the same, and hence the law may not hold good.

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[1] Thomas, S. E.—*Elements of Economics*, pp. 52-3.

[2] *See* Section 3 above.

6. Changes in Demand. The law of demand expresses a relation between demand and price. If the price rises demand decreases, and *vice versa*. But the words *increase* and *decrease*, used with demand when the price falls and rises respectively, are not considered quite correct. The proper words should be *strengthening* (*extension*) and *weakening* (*contraction*) of demand. Let us understand the difference between extension and increase on the one hand, and contraction and decrease on the other.

We use the expression *extension and contraction of demand* when the demand changes simply because the price has changed. The consumer plays a passive part. He is solely led by price. His demand schedule is fixed. There is a corresponding curve, and he simply goes up and down the *same* curve, as shown in the diagram given below:

Our consumer travels on the curve DD'. That is his set route fixed by his scale of preferences. At PQ price, he will buy OQ; if the price rises to P'Q' he will buy OQ'; and if it rises to P''Q'' his demand will be reduced to OQ'', and so on. If the price starts a reverse movement, he will slide back. He has fixed his own preference, and now he is entirely guided by price. This is extension or contraction of demand.

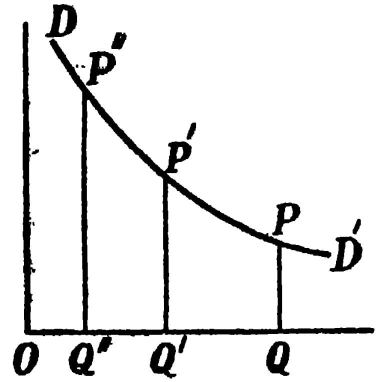

Fig. 17.

Take now the *increase of demand*. Here the consumer fixes his own demand ; he increases it or decreases it irrespective of the price. He plays the active part. He is guided by his own domestic requirements and circumstances, rather than by price. A man's income may have increased or his family requirements may have increased. A new scale of preferences becomes necessary. In this case, there will not be a movement along the old curve, but along a *new* curve.

For example, if the price of milk falls from 6 as. a seer to 5 as. a seer, and our consumer begins buying 5 seers daily instead of 4 seers, it is a case of *extension of demand*. But if he is prepared to buy 5 seers instead of 4 seers even though the price remains the same, or he continues to buy the same old quantity even if the price rises, we shall say that his *demand has increased*. In both of these cases, he is prepared to spend more than before, whereas in the case of extension there may not be any increase in the total outlay, for he buys more at the reduced price. To sum up, *extension of demand means more quantity at a lower price, and increase in demand means either more quantity at the same price or the same quantity at a higher price.* Similarly, while *contraction of demand means smaller quantity at a higher price, decrease in demand means either less quantity at the same price or the same quantity at a lower price.* This can be represented by diagrams as follows:—

Fig. 18 represents increase in demand. Along OX measure quantities in maunds and along OY prices in rupees per maund. Before the change in demand, at five rupees per maund (PM), 20 maunds of onions (OM) were demanded. Now suppose that the same 20 maunds are demanded at a higher price of 6½ rupees per maund (P″M), or at the same price of 5 rupees (PM=P′m′) 30 maunds (Om′) are demanded. These points P″ and P′ are on a new demand curve (D′D′) which will indicate an increase in demand.

Increase in Demand

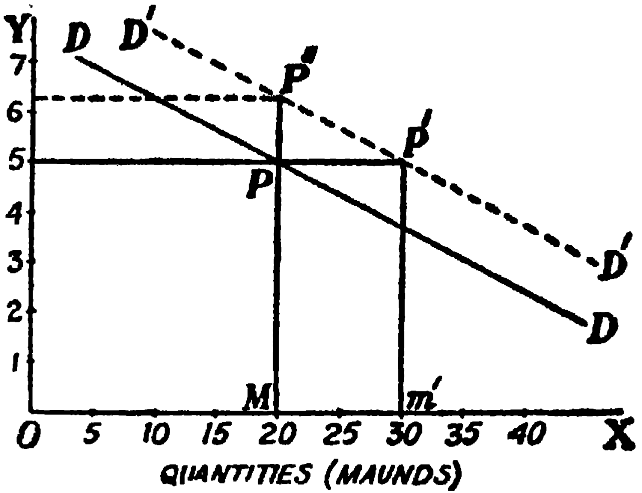

Fig. 18.

Fig. 19 illustrates decrease in demand. Before the change, the demand at 5 rupees (MP) is 20 maunds (OM). If after the change in demand, at the same price of 5 rupees (PM=P′m′) 10 maunds (Om′) are demanded, or at a lower price of 4 rupees (P″M) the same amount of 20 maunds (=OM) is demanded, points P′ and P″ will be on a new demand curve D′D′ illustrating a decrease in demand.

Decrease in Demand

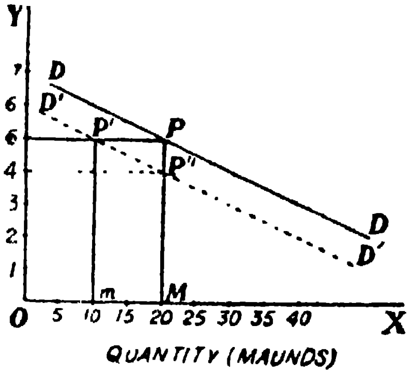

Fig. 19.

Why Demand Changes. It is clear that by changes in demand we do not mean mere extension or contraction of it. We mean, on the other hand, that there is a change in the very *conditions* of demand. It is a change in the consumer's scale of preferences. Such a change is not caused by a change in price. There are, on the other hand, several other factors which bring about a change in demand. They affect the consumer's scale of preferences and compel him to recast his demand schedule.

Following are some of the causes which bring about changes in demand :—

(*i*) *Changes in tastes and fashions.* Increasing habit of tea drinking has decreased the demand for milk. Change in the mode of dress means a change in the demand for the dress materials. The fashion among ladies to keep hair long or short brings about changes in demand for hair-pins, hair-nets, etc.

(*ii*) *Climate or weather changes.* It is obvious that demand must change with the season. In winter, there is a greater demand for warm clothing, for certain types of tonics and for coal or fuel. In summer, there is a demand for electric fans and cooling drinks and ice.

(*iii*) *Changes in population.* If, for instance, the Commonwealth countries and America allow a free entry to Indians, we can expect emigration from India. If Indians stick to their own mode of living in food and dress, demand for such things will be created in their new homes.

It is not merely the change in the size of the consuming population but changes in the composition of the population, too, which affect demand for certain commodities and services. In a country of increasing population like India, where hundreds of children are born daily in big cities, there will naturally be demand for toys, feeding bottles and nipples, perambulators, etc.

(*iv*) *Changes in the quantity of money stock.* Where there is inflation, the additional money will add to the purchasing power of the community, and the prices will rise. But the rise of prices will not be uniform in the case of all goods. People will have to readjust their expenditure; demand for certain things will be reduced and for others stimulated. For example, shortage of sugar increased demand for *gur* and *shakkar*, and restrictions on the supply of electricity created a demand for kerosene lamps, and so on.

(*v*) *Changes in real income.* Here we have a phenomenon quite opposite to the one mentioned above, *viz.*, of falling prices. A distinction is made between money income, *i.e.*, the amount of money which a man may earn, and real income which means the quantity of goods and services which he can buy with that amount of money. In times of technical progress, there is a large output of cheap goods. The purchasing power of money increases or, as it may be said, real incomes increase. Less money will be needed to purchase the same quantity of goods, and the saving so made will find outlet in the purchase of some other commodities. The demand schedules will have to be recast. Some goods may be eliminated and entirely new goods purchased; demand for some goods will decrease and that for others increase.

(*vi*) *Change in income distribution.* Through the instrument of public finance, *e.g.*, by taxing the rich and spending money on the poor, wealth is redistributed. There is a transfer of spending power. This is bound to affect demand. Demands for those goods will increase which are purchased by a class whose spending power has increased, and *vice versa.*

(*vii*) *Change in savings.* Demand for goods is affected by a change in consumer's propensity to save. Large saving means less money available for the purchase of goods. The demand will therefore decrease.

(*viii*) *Change in asset preferences.* It is quite obvious that if a consumer develops marked liquidity preference, his demand for goods must change. The demand will decrease.

(*ix*) *Goods with inter-connected demand.* In case of substitutes, *e.g.*, tea and coffee, an increase in the consumption of one will lead to a decrease in the demand for the other. In the case of *complements*, *e.g.*, horse and carriage, increased demand for one will augment that for the other.

In the case of *joint supply, e.g.*, wheat and straw, the increased demand for one will lead to the cheapening of the other, and may, therefore, stimulate its demand, too, after some time.

When there is a case of *joint demand*, the increase in the demand for the ultimate object, *e.g.*, the house, will increase the demand for everything needed in building a house.

In the case of *composite supply*, *e.g.*, light obtained from electricity, gas or kerosene, cheapening of any one of them will reduce the demand for the others.

In the case of *composite demand*, *e.g.*, water required for drinking, washing, bathing, etc., any extension or contraction of its uses will correspondingly change the demand.

Thus the demand for a commodity does not depend only on its own price but prices of other goods too.

(*x*) *Conditions of trade.* Demand for everything is greater in a boom even though the prices are rising. On the other hand, in times of depression, there is a general slackening of the demand.

Elasticity of Demand. We have studied the law of demand and we have seen that there is an inverse relation between demand and price. A change (rise or fall) in price leads generally to a change (contraction or extension) in demand. This attribute of demand, by virtue of which it stretches or contracts under the pressure of a change in price, is known as Elasticity of Demand. "The term elasticity expresses the degree of correlation between demand and price." It is the rate at which the quantity demanded varies with a change in price. Elasticity of demand indicates the responsiveness of demand to changing prices. To be more exact, "The elasticity of demand is a measure of the relative change in amount purchased in response to a relative change in price on a given demand curve."[1] Another precise definition is by Mrs. Joan Robinson thus : "The elasticity of demand, at any price or at any output, is the proportional change of amount purchased in response to a small change in price, divided by the proportional change of price."[2]

But the change in demand is not always proportionate to the change in price. A small change in price may lead to a great change in demand. In that case, we shall say that the demand is *elastic* or sensitive or responsive. If, on the other hand, even a big change in price is followed only by a small change in demand, it is said to be a case of *inelastic* demand. For example, even if the price of salt varies widely, we continue to buy almost the same quantity ; the demand is inelastic. But, if the price of wireless sets falls, many people, who could not afford before, may now be induced to buy ; the demand will stretch or expand; it is elastic. In the words of Marshall, "*The elasticity (or responsiveness) of demand in a market is great or small according as the amount demanded increases much or little for a given fall in price, and diminishes much or little for a given rise in price.*"

There are few commodities, however, for which the demand is inelastic. Demand cannot be entirely insensitive to changes in price.

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[1] Meyers, A. L. —*Elements of Modern Economics* (1951), p. 67.

[2] Robinson (Mrs.), J.—*The Economics of Imperfect Competition* (1945), p. 18.

Instead of saying 'inelastic', we should say 'less elastic.' Elasticity is a matter of degree only.

Demand may increase either because, with a fall in price, the existing purchasers will purchase more or the new purchasers will begin purchasing. Generally, however, it is the *potential* purchasers who lend elasticity to demand. For example, when the price of wheat falls it is not through increased purchases by existing buyers but through increased sales to new purchasers that more wheat will now be sold.

The *Income Effect* relates to the changes in consumer's satisfaction consequent on a change in his income while the price remains unchanged. If, however, prices change and income changes in such a way that combined with the changes in prices the consumer is neither better off nor worse off, then it is called *Substitution effect*.

7. Income Elasticity and Price Elasticity. Income elasticity (e_i) may be defined as

$$e_i = \frac{\text{Proportionate change in purchases of a good}}{\text{Proportionate change in income}}.$$

Since income effect is normally positive, income elasticity of demand is also positive. It is zero when change in income makes no change in purchases and it is negative when with an increase in income a consumer purchases less, *e.g.*, in the case of inferior goods. Careful distinction should be made between price elasticity of demand and income elasticity of demand. Price elasticity measures the responsiveness or sensitiveness of demand to (small) changes in price ; while income elasticity refers to such responsiveness to changes in the incomes of the purchasers. The first refers to the *expenditure effect* ; the second to *income effect*. He will substitute relatively cheaper goods for the relatively dearer ones. This is a case of *compensating* variation in the consumer's income.

When the prices change while the money income remains constant, even then the consumer is made either better off or worse off, such an effect is called *price effect*. There will also be need to rearrange purchases and real income will also change making the consumer better or worse off. There will thus be an income effect also. It is a combination of income effect and substitution effect.

It may be carefully noted that so far as any individual seller or firm is concerned the demand for the product is highly elastic even though the demand for the product as a whole may be inelastic. By lowering the price, as compared with his rivals, he can increase the demand for his product. The demand curve will thus be a horizontal line.[1] Both elasticities are valuable aids in the measurement of demand for different commodities. As such it is also helpful in measuring the incidence of taxation.

We may also familiarize ourselves with another term, *viz.* cross-elasticity. Here change in the price of one good causes a change in the demand for another ; cross-elasticity of demand=

$$\frac{\text{Proportionate change in purchases of Y}}{\text{Proportionate change in the price of X}}.$$

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[1] For diagrammatic representation *see* our *Refresher Course in Economic Theory*, Ch. VI.

8. Relation of Elasticity with the Law of Diminishing Utility. The concept of elasticity of demand is connected with the law of diminishing utility. Marginal utility varies with supply. It falls when the supply is increased and rises when the supply contracts. But the fall of marginal utility does not occur at a uniform rate in all commodities. In certain cases, like salt, we soon get fed up, and the marginal utility falls very rapidly. In such cases, the demand is inelastic, and no fall in price can induce us to buy more. In some other cases, the marginal utility comes down very gradually, *e.g.*, luxuries. Any fall in the price of such commodities is sure to stretch the demand. The demand is, therefore, elastic. In short, *the demand is inelastic when the marginal utility falls rapidly, and elastic when it falls slowly.*

9. Elasticity of Demand and Consumer's Surplus. The nature of demand has also a bearing on the amount of consumer's surplus. In the case of necessaries and conventional necessaries, the demand is inelastic. Their prices in the market are fairly low, but the consumers are prepared to pay much more for them than they have actually to pay. The difference between what they are prepared to pay and what they actually pay represents consumer's surplus. We find, therefore, that the *consumer's surplus is large where the demand is inelastic, and it is small where it is elastic.*

10. What Determines Elasticity of Demand. It is not possible to classify goods according to the nature of their demand and lay down rigid rules to determine whether demand is elastic or inelastic. But we can formulate some general rules in this connection. Elasticity is relative. For one person or at one place the demand may be elastic, and, for another person and at another place, it may be inelastic. Subject to this important proviso, we may lay down the following rules :

(*i*) *For necessaries and conventional necessaries the demand is inelastic or less elastic.* We must buy fixed quantities of such commodities whatever the price. In a poor country like India, even the demand for things like salt is somewhat elastic. In 1923, the doubling of the salt duty reduced the consumption of salt. The change in the price of wheat may be immaterial for upper and middle classes, but its consumption will certainly increase among the poor when the price falls.

It may be carefully noted that demand for wheat (a necessity of life) as a whole may be inelastic, but in a competitive market, demand for the output of any *particular firm* is highly elastic. If it raises the price a bit, it may lose all the demand.

(*ii*) *Demand for luxuries is elastic.* It stands to reason that lowering of the price of things like radio sets, refrigerators, and artistic furniture will lead to more being bought. But by whom? Certainly not by the rich people. For them these things are conventional necessaries. They must buy them and having purchased one, they will not buy another, whatever the price. Their (*i.e.* the rich people's), demand, therefore, is not elastic ; it is elastic for people of lesser means only.

Here again we cannot generalise. A luxury is a relative term. A high-priced luxury of the poor man is a low-priced necessary for the rich. A thing may be luxury in one country and a necessary in another ; luxuries of yesterday have become necessaries of today. Thus for the same article, the demand may be elastic for some people and inelastic for others.

(*iii*) *For substitutes the demand is elastic.* "The main cause of differences in the responsiveness of the demand for goods to changes in their prices lies in the fact that there are more competing substitutes for some goods than for others." When the price of tea rises, we may curtail its purchase and take to coffee, and *vice versa.* Changes in price will lead to expansion or contraction in demand.

However, very few things can serve as suitable substitutes ; coffee is not exactly like tea. Attempts have been made in Italy, America and Argentina to replace our jute, but without much success. It might appear that in the matter of toilet requisites you have several alternatives. You might use Ponds cream or Bombay cream, Listerine or Maclean's tooth paste, Hamam soap or Prefect soap, Kiwi polish or Cherry Blossom, and so on. But can you really use *any* of them ? The manufacturer does not want that his product should belong to the elastic demand category. He, therefore, gives it a special label and, by subtle and persistent propaganda, he will induce you to buy it. You become habituated to its use. You are not satisfied until you get that particular brand. He has thus changed its demand from elastic into inelastic. Substitutes are, therefore, no substitutes.

(*iv*) *Demand for goods having several uses.* Demand for such goods is *elastic.* Coal is such a commodity. When cheap, it will be used for cooking, heating and industrial purposes ; its demand will increase. But when the price goes up, it will be put only to very urgent uses, and less will be purchased. The demand will contract.

(*v*) *Jointly demanded goods.* In case of joint demand, elasticity is comparatively low. If carriages become cheap but the prices of horses continue to rule high, demand for carriages will not extend much.

(*vi*) *Demand for goods the use of which can be postponed is elastic.* Most of us, during the war, postponed our purchases where we could, *e.g.*, building a house, buying furniture or having a number of warm suits. We go in for such things in large measure when they are cheap. Demand for them is elastic.

(*vii*) *Elasticity also depends on the level of prices.* If a thing is either very expensive or very cheap, the demand will be inelastic. If the price is too high, a fall in it will not increase the demand much. If, on the other hand, it is too low, people will have already purchased as much as they wanted ; any further fall will not increase the demand. In the words of Marshall, "*Elasticity of demand is great for high prices, and great or at least considerable for medium prices, but it declines as the price falls, and gradually fades away if the fall goes so far that satiety level is reached.*"[1]

(*viii*) The same commodity may have inelastic demand for certain uses, *e.g.*, wheat for human food, and elastic for certain other purposes, *e.g.*, wheat used for feeding the cattle.

(*ix*) Elasticity also *varies with incomes.* The demand on the part of the poor people is more sensitive to price changes. In order to derive maximum benefit from their meagre income, they must be alert to vary their purchases in response to changes in prices. The rich people, on the other hand, do not bother much and continue to buy practically the same quantities even though the price may have changed. The poor man has to run after cheaper substitutes, but the rich man does not feel any such need. He can well afford to buy what he is buying.

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[1] Marshall, A.—*Principles of Economics* (1936), 103.

The above discussion confirms us in the view that it is not possible to lay down any hard and fast rule as to which commodity has an elastic demand and which inelastic. When we want to know whether the demand is elastic or inelastic, we must decide the class of people with reference to whom we wish to ascertain the fact.

11. Measurement of Elasticity. For practical purposes it is not enough to know whether the demand is elastic or inelastic. It is more useful to find out to what extent it is so. For that purpose it is essential to measure elasticity.

When people must continue to buy *exactly* the same quantity whatever the price, elasticity is zero. It means that they cannot do without this quantity however high the price, or they cannot be induced to buy *any* more, however low the price. The demand is absolutely inelastic. The other extreme is when, even with a slight rise in price, further purchases will *altogether* stop. Elasticity, here, is said to be equal to infinity, *i.e.*, it is absolutely elastic. Between these two extremes there are varying degrees of elasticity.

Two methods have been suggested for the measurement of elasticity:—

First Method. To compare the total outlay of the purchaser (or total revenue, *i.e.*, total value of sales from the point of view of the seller) before and after the variations in price. Elasticity of demand is expressed in three ways: (1) Unity (or unitary elasticity), (2) greater than unit, and (3) less than unity. It is unity, when, even though the price has changed, the total amount spent (total revenue) remains the same. The rise in price is exactly balanced by reduction purchases, and *vice versa*. A rectangular hyperbola represents unit elasticity.

Elasticity is said to be greater than unity, between two prices, when, with the fall in price, the total amount spent (total revenue) increases or the total amount spent (total revenue) decreases as the price rises.

Elasticity between two prices is considered to be less than unity when the total amount spent (total revenue) increases with the rise in price and decreases with a fall in price.

It will be clear from the following schedule:—

	Price of pencils per dozen (1)		Quantity demanded (2)	Total autlay (revenue) (3)=(1)×(2)	
	Rs.	as.	Dozen	Rs.	as.
(1)	1	8	3	4	8
(2)	1	4	4	5	0
(3)	1	0	5	5	0
(4)	0	12	6	4	8
(5)	0	10	7	4	6
(6)	0	8	8	4	0

As between (1) and (2), the elasticity is greater than unity, because the total amount spent (total revenue) decreases when the price rises and increases when the price falls. As between (2) and (3), it is unity as the total amount spent (total revenue) remains the same. Between (4) and (5), the elasticity is less than unity because the total amount spent (total revenue) increases when the price rises and decreases with a fall in price. In Marshall's words, "If the elasticity of demand is equal to unity for all prices of the commodity, any fall in price will cause a proportionate increase in the amount bought, and therefore will make no change in the total outlay which purchasers make for the commodity."[1] A curve representing constant total outlay at all prices and where elasticity is unity throughout is called rectangular hyperbola. Excepting such cases no curve represents the same elasticity throughout its length. Usually the curve shows different elasticities at different points.

Second Method. In the second method, we compare the percentage change in price with the percentage change in demand. Suppose the price rises by 50%. If the demand decreases by 50%, elasticity is unity; if it decreases by more than 50%, it is greater than unity; and if it decreases by less than 50%, it is less than unity. The formula is :—

$$\text{Elasticity of demand} = \frac{\text{proportionate change in amount demanded}}{\text{proportionate change in price}}$$

$$= \frac{\text{change in amount demanded}}{\text{amount demanded}} \div \frac{\text{change in price}}{\text{price}}$$

using symbols,[2]

$$\eta = \frac{\dfrac{\Delta q}{q}}{\dfrac{\Delta p}{p}} = \frac{\Delta q}{\Delta p} \cdot \frac{p}{q}$$

where η = elasticity
q = quantity
p = price
Δ = infinitesimal change in quantity or infinitesimal change in price.

The elasticity of demand is always negative, although by convention it is taken to be positive. Hence η is always less than zero, unless of course the demand curve is abnormal *i.e.*, sloping upwards from right to left.

12. Diagrammatic Representation of Elasticity of Demand.[3] In these two diagrams, DD' is the demand curve. In one diagram, the elasticity is zero and in the other, it is infinity. But elasticity equal to zero and infinity can be theoretically conceived only. In the former DD' is parallel to OY, in the latter to OX. The smaller the elasticity the nearer is the position of the curve to that under zero, and the greater the elasticity the nearer is the position of the curve to that under infinity. Only in these two curves can

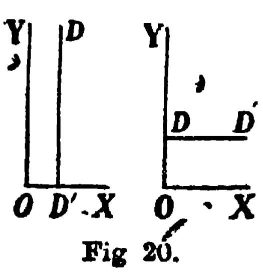

Fig 20.

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[1] Marshall, A.—*Principles*, p. 839.

[2] Stigler, G. J.—*Theory* of *Price* (1949), p. 52.

[3] For an advanced version *see* Stigler pp. 51-4.

the elasticity be the same at all points. In the case of other curves, elasticity is different at different points of the curve, as in Fig. 21 below, since elasticity is always at a point and not of the curve.

There is another way of measuring elasticity. Take the following demand curve. DD' is the straight line demand curve. Elasticity is represented by the fraction : distance from D' to a point on the curve divided by the distance from the other end to that point. Thus elasticity of demand on the points P_1, P_2, and P_3 is

$$\frac{D'P_1}{DP_1}, \frac{D'P_2}{DP_2} \text{ and } \frac{D'P_3}{DP_3}$$

respectively. Since P_2 is in the middle of the curve

$$\frac{D'P_2}{DP_2}=1$$

i.e., elasticity is unity. It can be shown that elasticity at a lower point on the curve is less than unity than at a higher point.[1]

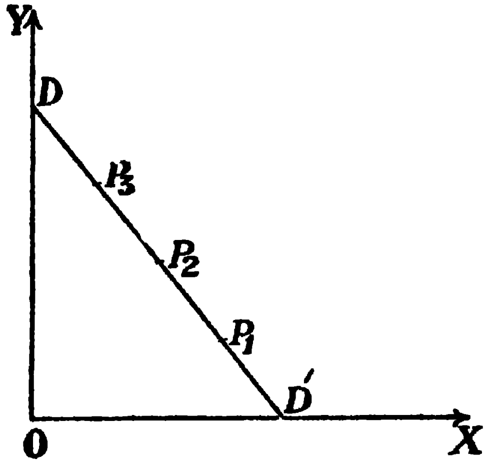

Fig. 21.

Even if the demand curve is not a straight line, the above formula will apply. A tangent will, however, have to be drawn at the price point on the curve where elasticity is to be measured. It is illustrated in the diagram given below :—

DD' is the demand curve, and two tangents PM and P'M' are drawn respectively at the points T and T'. At the point T elasticity will be equal to $\frac{TM.}{PT}$. This will apply only so long as the tangent and the curve coincide which means for an infinitesimally short distance. If there is any departure from the point P, a new tangent will have to be drawn and elasticity ascertained accordingly. At the point T' elasticity $=\frac{T'M'}{P'T'}$. Clearly elasticity at T is greater than elasticity at T'.

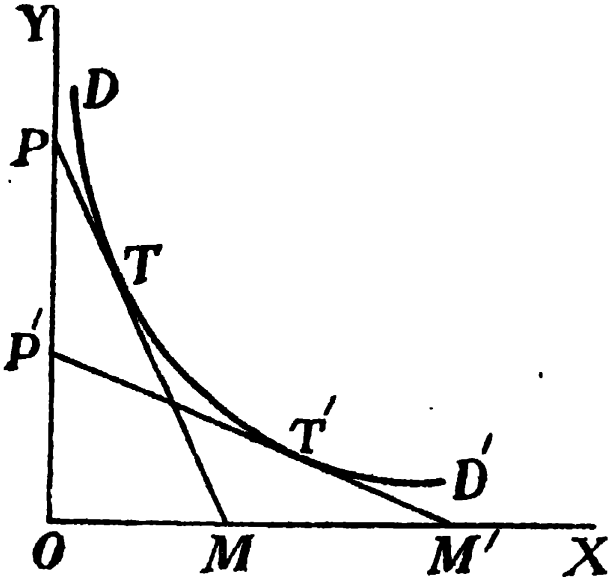

Fig. 22.

The slope of the curve is not to be confused with elasticity. The steepness of the curve is no indication of the extent of elasticity. In the above diagram, the demand curve DD' has the same steepness but different elasticity at different points. If elasticity and slope were closely related, the elasticity would be constant throughout. But it is not so. The demand is elastic near the price-axis (OY), say near the point D and unitary half way, *i.e.*, at point P_2, and inelastic near the quantity-axis *i.e.*, near D'. Since elasticity depends *not on absolute changes but on percentage changes*, it really depends on the steepness of the curve relative to the price quantity ratio.[1]

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[1] *See our Refresher Course*, Ch. VI.

In this figure, the curves BP and AP have different slopes, but they have the same elasticity at a given price. Let OM be the price. Draw a straight line parallel to X-axis cutting BP at R and AP at S. Now elasticity of the curve BP at the point R is

$$\frac{BR}{RP}$$

The elasticity of the curve AP at the point S is

$$\frac{AS}{SP}$$

Now in the right-angled triangle BOP

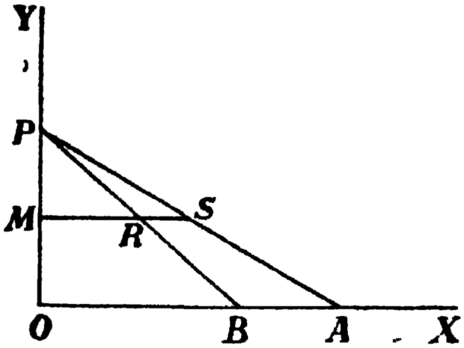

Fig. 23.

$$\frac{BR}{RP}=\frac{OM}{MP}$$

But in the right-angled triangle AOP

$$\frac{OM}{MP}=\frac{AS}{SP}$$

Hence

$$\frac{BR}{RP}=\frac{AS}{SP}$$

That is, elasticity at both R and S is the same even though the two curves have different slopes. Such curves are called *isoelastic.*

We can, however, conceive of one case where the relative elasticity of two curves can be known from their respective slopes. Suppose there are two curves, AB and CD representing the demand for the same good in separate markets as shown in the adjoining diagram. Then we can say that CD is more elastic than AB.

Let OM be the price and from M draw a straight line parallel to the X-axis to cut AB in R and CD in S.

Then elasticity of demand at the point R is

$$\frac{BR}{RA}$$

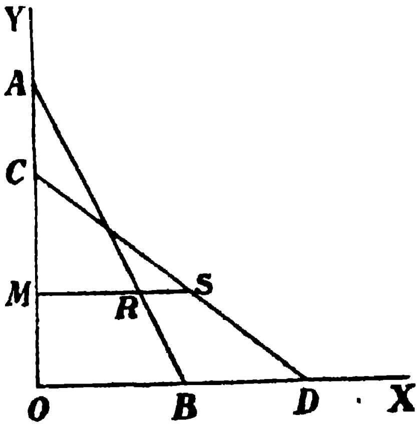

Fig. 24.

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[1] *See* Samuelson, P. A.—*Economics* (1948), p. 451, especially how the formula has been worked out in the footnote.

The elasticity of demand at the point S is

$$\frac{DS}{SC}$$

Now in the triangle AOB

$$\frac{BR}{RA}=\frac{OM}{MA}$$

and in the triangle COD

$$\frac{DS}{SC}=\frac{OM}{MC}.$$

Since $\frac{OM}{MC}$ is greater than $\frac{OM}{MA}$

therefore, $\frac{DS}{SC}$ is greater than $\frac{BR}{RA}$.

That is, curve CD is more elastic than curve AB.

13. Practical application of the Concept of Elasticity of Demand. This concept is of great practical importance in the sphere of government finance as well as trade and commerce. The minister of finance can be more sure of his revenues if he taxes those commodities for which demand is inelastic. The tax will no doubt raise the price but the demand being inelastic, people must buy the commodity. Thus the demand will not decrease. But, on humanitarian grounds, such taxes are generally avoided. Since such commodities are necessaries of life, their taxation is bound to affect public welfare.

In the same manner, the businessman, especially if he is a monopolist, will have to consider the nature of demand while fixing his price. In case it is inelastic, it will pay him to charge a high price and sell a slightly smaller quantity. If, on the other hand, the demand is elastic, he will lower the price, stimulate demand and thus maximize his monopoly net revenue. In a competitive industry, however, demand even for necessaries produced by a particular firm is elastic. No firm is in a position to dictate any price.

The concept of elasticity finds application in the case of joint products also. The separate costs are not ascertainable. The producer will be guided mostly by demand and its nature while fixing his price. The transport authorities fix their rates according to this principle when we say that they charge what the 'traffic will bear'. When an industry is subject to increasing returns, the manufacturer lowers the price to develop the market so that he may be able to produce more and take full advantage of the economies of large-scale production. We, therefore, see that the discussion of elasticity is not merely of academic interest.

Elasticity of demand affects industrial output. But in this connection we have to distinguish between elasticity of an individual consumer and of the market as a whole. No amount of reduction in the price will induce an individual to buy another copy of the same newspaper or magazine. The individual demand is inelastic but not the market demand, and it is the latter which matters for the producer. Reduction in price will certainly increase the sale in the market as a whole.

The concept of elasticity explains the paradox of poverty in the midst of plenty. A bumper crop instead of being a cause of prosperity may spell disaster if the demand for the commodity is inelastic. This is specially so if the produce is perishable. A rich harvest may actually fetch less money than a poor one. In the case of storable articles, however, the demand is less inelastic, or is elastic. A fall in the price may lead to increased purchases and storing. This is with reference to a particular year, but over a period of five years or so, the demand even for such commodities, *e.g.*, wheat, is relatively less elastic. If the elasticity of demand for wheat is unity, the incomes of the growers would remain the same whatever the condition of the crop (and therefore price). In years of bad harvest, the rise in price would sufficiently compensate the grower for the reduced output. In order to ensure a stable income to the farmers, the government must, therefore, take note of the degree of elasticity of demand for a particular crop and adopt measures to counteract gluts and scarcities as the case may be.

Elasticity of demand also exerts its influence on wages. If demand for labour is relatively inelastic, it is easy to raise wages, but not otherwise.

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CHAPTER VII

PRODUCTION—GENERAL

1. Meaning of Production. Production is sometimes defined as the *creation of utility* or the creation of want-satisfying goods and services. It is said that just as man cannot destroy matter, he also cannot create matter. What he can do is to give it utility. "If consuming means extracting utility from," says Fraser, "producing means putting utility into".

But this is not a scientifically correct definition. To produce a thing which has utility but not value is not production in the economic sense. One may spread the cult of Yoga and promote the physical and spiritual well-being of one's friends—a thing of great utility—but unless one makes it one's profession, his activity will not come under production. *Production, therefore, should be defined, not as creation of utility, but the creation (or addition) of value.* Utilities are created in three forms : (*i*) form utility, (*ii*) time utility, and (*iii*) place utility.

It may be noted that in the study of production in Economics, we are not concerned with the technique of production. We are concerned only with its economic aspect. For instance, how to produce fine cloth is a matter of technique. But to decide about the relative proportions of fine, medium and coarse cloth is a matter for Economics.[1]

Production consists of a long chain of producers covering the following industries : (1) *Extractive industries*, including mining, fishing, farming, etc.—mostly concerned with the production of raw materials ; (2) *manufacturing industries* turning raw materials into finished goods ; (3) *commercial services* like buying and selling, transport, banking and insurance, etc.; and (4) *direct services* to the consumers like the services of domestic servants, doctors, lawyers, teachers, etc.

The volume of production has great social significance. *In the last resort, the standard of living of a people must depend on the volume and variety of production in the country.* True, a country may borrow from abroad or receive money in charity to tide over a period of stress and strain. But loans have to be repaid, and charity is not a perennial stream. No sure foundation of standard of living can be built on these extraneous or fortuitous resources.

The volume of production in India is very small in relation to its teeming millions, and the standard of living is the lowest in the world. "Produce or perish " should be our slogan. It should also be emphasized that economic welfare does not depend only on the size of national income but also on how it is distributed.

2. Factors Determining the Volume of Production. In our efforts to increase the volume of production, we shall have to analyse the factors on which it depends. A study of these factors and a proper appreciation of their relative importance will put us on the high road to increased production.

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[1] For distinction between Economics and Technology, read Robbins', *Nature and Significance of Economic Science*, Ch. II, Sec. 3.

(1) In the first place, production in a country depends on men, money and materials. If our men are hardworking and resourceful, if capital is plenty and if our land turns out a rich variety of raw materials, a large volume of production is assured. Production in a country is limited by the quality and the quantity of the productive resources available.

(2) Production also depends on the development of technique and the application of science to agriculture and industry. In the absence of scientific and technical knowledge, not much can be achieved. What can a hand-weaver achieve in the face of a power loom ?

(3) Production depends further on the development of credit, banking and transport facilities. The manufacturer is seriously handicapped if there are no agencies to give him financial accommodation. Finance greases the wheels of productive machinery. Also, there will not be much use in producing goods unless they can be cheaply and quickly transported to their markets.

(4) The political factor is also very important. If the State takes a sympathetic view and actively assists in production by providing intelligence, education and financial and other aids, production can be accelerated. The Russian experiment is a sufficient indication of what can be achieved in this way.

(5) Finally, there are the natural factors. Climate, soil, mountains and rivers are all Nature's gifts. Their bearing on production can hardly be exaggerated. Floods, earthquakes and other natural calamities undo man's work. We must learn to harness nature's forces for the service of man if production has to be increased and protected.

3. Agents of Production.[1] The phrase "agents of production" is applied to the owners or suppliers of productive elements. It can more properly be called a factor of production. Fraser defines "factor of production as a group or class of original productive resources". The term "factor" is used for a *class* of productive elements the individual members of which are known as "*units*" of the factor. Modern economists prefer to talk in terms of anonymous productive services rather than the classical factors of production[2]. They have also been called "inputs", and what they produce have been called "outputs."

The agents of production have been classified as *Land*, *Labour*, *Capital*, and *Organisation* (or *Enterprise*). Land in Economics does not mean mere soil. as in the ordinary speech. It is synonymous with all the natural resources available from air, water, from above the land surface and below it, which yield an income. Similarly, labour does not mean merely physical or manual exertion, but all types of work done by man for a monetary reward. It is synonymous with man. By Capital is meant the whole of the stock of wealth consisting of machines, tools, implements, raw materials, etc., which is used in the production of further wealth. Organisation or Enterprise consists in bringing the above three factors together, assigning work to each and bearing the risk of production. The entrepreneur, who supplies this factor, initiates and directs production and bears the risk.

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[1] *See Fraser*, L. M.—*Economic Thought and Language* (1947), Ch. 12.

[2] *See* Stigler, G. J.—*Theory of Price* (1947), I. p. 114-15.

Some economists reduce this classification from four to two, Land and Labour (or Man and Nature), on the ground that they are the only original or primary factors. It is said that capital has no independent origin and is merely the outcome of the efforts of land and labour, while organisation is merely a form of labour. But whatever the origin, capital as a distinct factor of production performs a very important function and occupies an important position. Similarly, the entrepreneur's work is of a distinct type, and he is remunerated on a different basis. The four-fold classification will, therefore, better represent the conditions prevailing in the economic world today.

This classification, however, has been challenged recently by economists like Benham, Wicksteed, Davenport as being technological, unscientific and without any special significance. It is said that there are very wide divergences between different kinds of labour and marked differences within land itself ; nor are capital and enterprise homogeneous. There is no reason, then, of putting them in separate categories on the implication that they differ fundamentally from one another, but in themselves they are homogeneous.

Far from being separate and distinct the factors of production can often be substituted for one another. Labour can take the place of machinery, and *vice versa*. The entrepreneur, by his ability, may be able to save both capital and labour which means the substitution of his skill for them. Moreover, the separation of land from capital seems to have no logic behind it. To an individual land is capital, as it assists in the production of further wealth. Similarly, peculiarities of labour have been exaggerated. This four-fold classification would have some meaning if it could be shown that these categories of the agents of production are subject to the operation of different laws of production or distribution. This, however, is not the case.

In Fraser's words "a factor calss must be a group of mutually substitutable units". Judged by this test the conventional quadripartite classification is not at all adequate. Fraser continues, "None of the four traditional classes (with the possible exception of capital) remotely resembles a group of mutually substitutable units. Not merely are their members heterogeneous in nature and divergent in value, but it is also not uncommon for units belonging to one class to be more readily interchangeable with units belonging to another than with its own fellows. Alike in respect of 'internal substitutability and of 'external' substitutability the analysis of productive resources into land, labour, capital and enterprise is unsatisfactory and misleading."[1]

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[1] **Fraser, L. M.**—*Economic Thought and Language* (1947), p. 204.

Although we must reject the traditional classification of factors on scientific grounds, yet in an elementary study it can be retained with advantage for easier understanding. We adhere to the orthodox classification not merely for reasons of expository convenience, but also on account of the fact that its abandonment will necessitate a radical reorganisation of the vast body of material which Economics at present comprises. Further, the traditional classification has been defended on *distributional* grounds, *i.e.*, it leads to classification of incomes. It indicates four types of incomes, *viz.*, rent, wages, interest and profit.

LAND

4. Meaning and Importance. The term 'land' has been given a special meaning in Economics. It does not mean soil, as in the ordinary speech, but it is used in a much wider sense. In the words of Marshall, land means "the materials and the forces which nature gives freely for man's aid, in land and water, in air and light and heat."[1] Land stands for all natural resources which yield an income or *which have exchange value. It represents those natural resources which are useful and scarce, actually or potentially.*[2]

In every stage of economic evolution, nature has been man's most useful ally. In the hunting and the fishing stage, nature supplied food freely and sustained human life. In the pastoral stage, but for land surface and the pastures and meadows, herds of cattle and sheep cannot be reared and kept. The utility of land is obvious in the agricultural stage for how else could man grow his crops without soil, air and sunshine ? When the agricultural stage gives place to the handicraft and industrial stage, land is still essential. Every commodity that we use can, directly or indirectly, be traced ultimately to land. Look in whatever direction we may, our debt to nature is immense and obvious. Our very existence would be impossible without it. In Marshall's words, "Earth's surface is a primary condition of anything that a man can do, it gives him room for his actions."

5. Peculiarities of Land. In contrast to other factors of production, land presents certain well-marked peculiarities :

(*i*) *Land is Nature's Gift.* Land has been given to man by nature. But it is pointed out that man has reclaimed forest land and marshes through his own effort ; and has put manure into the soil to make it more productive. It is said therefore that land is thus as much 'man-made' and a 'produced' factor as any other. But man's achievements in the making of land are insignificant as compared with what nature has done for him. As for air, sunshine and location of a plot of land, man has done practically nothing and they are as much a part of nature as the land surface itself.

(*ii*) *Land is fixed in quantity.* Land area cannot be increased. It is said that *land has no supply price.* Price of land prevailing in the market cannot affect its supply. Higher price cannot attract more of it and a lower price cannot lead to its withdrawal. Land being fixed as population increases, it comes to command a scarcity rent.

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[1] Marshall, A.—*Principles of Economics* (1936), p. 138.

[2] Fraser, L. M.—*Ibid.*, p. 222.

(iii) *Land is permanent.* In spite of the havoc wrought by bombing in the war, productivity is restored to land after a short and simple treatment. There are inherent properties of the land which Ricardo called 'original and indestructible.'.

(iv) *Land lacks mobility* in the geographical sense. Although some vine-growing clay has been transported from France to California, yet land cannot be bodily transferred from one place to another. This fact is responsible for the disparity of rents in different places.

(v) Finally, land provides *infinite variations* of degrees of fertility and situation, so that no two pieces of land are exactly alike. This peculiarity explains the concept of margin of cultivation.

6. **Productivity of Land.** The value of land's contribution to production depends on its productivity. There are several factors on which this productivity depends.

(i) *Natural Factors.* The most important set of factors on which the productivity of land depends are the *natural factors.* Some parts of India, like the Indo-Gangetic plain, are very fertile, others are arid and barren. They are what nature made them.

(ii) *Human Factor.* But productivity also depends on the *human factor.* Man has tried to make a conquest of nature. Forests have been cleared, marshes drained off and, through irrigation facilities, the barren lands have been transformed into smiling gardens.

(iii) *The Situational Factor.* Another important factor on which the productivity of land depends is the *situational factor.* A plot of land, even of comparatively poor quality, situated near the city is considered much more productive than one situated in a remote part. Situation makes all the difference.

7. **Extensive and Intensive Cultivation.** We have seen that man's efforts have been directed to wresting the maximum reward from niggardly nature. There are two methods of cultivation adopted by him : (1) Extensive cultivation, and (2) intensive cultivation.

In *extensive cultivation,* man brings more and more land under the plough, more perhaps than he can effectively cultivate. He makes no corresponding increase in the labour and capital applied to land. In new countries, where land is enough and to spare, man follows the extensive method of cultivation.

The other method is known as the *intensive method* of cultivation. In this case, land is supposed to be very much limited so that a farmer has only a small holding. Naturally he must make the most of it. He invests lot of capital. He must buy the best of implements and till the land thoroughly. He must select his seeds with meticulous care and sow them with proper spacing. His farm must have ample irrigation facilities. He must adopt a plan of systematic rotation. In short, his method must be scientific.

Does the extensive method imply a large farm and the intensive method a small one ? Not necessarily. We generally find that where land area is vast and farms are large, the farmer follows the extensive method of cultivation; on the other hand, where land is relatively scarce, he must cultivate the same plot of land more intensively. But this is not always so. In the U.S.A. and Canada, there are very big farms but the farmers there adopt the latest scientific methods of cultivation which we have called the intensive method. In India, on the other hand, holdings are small but cultivation is being carried on by the most primitive methods which may be called the extensive method. Hence extensive method and large farms and intensive method and small farms do not go always together.

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CHAPTER VIII

LABOUR

1. Meaning of Labour. In the ordinary speech, the term 'labour' means a mass of unskilled labour. But in Economics it is used in a wider sense. Any work whether manual or mental which is undertaken for a monetary consideration is called 'labour' in Economics. Any work done for the sake of pleasure or love does not fall under labour in the economic sense. In Marshall's words, "*Any exertion of mind or body undergone partly or wholly with a view to some good other than the pleasure derived directly from the work*"[1] *is called labour*. Labour in this sense, includes "the very highest professional skill of all kinds, as well as the labour of unskilled workers and artisans" and "of those employed in education, in the fine arts, in literature, in science, in the administration of justice and in governments in all its branches ; and we must include also, not only the labour that results in the permanent form but also that renders services which perish in the act."[2]

As to what is productive and unproductive labour has been a matter of controversy. According to Physiocrats only agriculture is regarded as productive labour. Later manufacturers' labour came also to be regarded as productive. Even according to Adam Smith unless labour results in some material value it must be regarded as unproductive. Pursuit of what are called liberal arts was regarded as unproductive. He says the labour of the most respectable orders in society is like that of menial servants unproductive of any value *e.g.*, the sovereign with all his officers both of justice and order, army and navy. But according to modern conception all labour is regarded as productive provided it is done for getting an income.

What about the labour which is wasted, misdirected or fails in its purpose, *e.g.*, labour spent in digging the Panama Canal which collapsed ? Marshall would exclude this labour from the category of productive labour. But this too is not a correct view. Even the labour which failed to fructify did get the remuneration all right. The motive was productive, the result is immaterial. " As value theory," says Fraser, " must abstract from mistakes and irrationalities therefore labour must be either productive, *i.e.*, must issue in some utility or else must fall outside the province of the economic theorist".[3] Fraser mentions the case of a singer who is nuisance and who is paid something to get rid of him and to make him move on. To the singer himself, his labour is productive. But what he does is to create disutility. There is larger range of such activities in the modern world, for instance, blackmail, racketeering, etc. They are disproducive.

The work of pirates, dacoits, thieves, paupers, gamblers, illegitimate speculators, pick-pockets, etc., and all such anti-social activi-

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1. Marshall—*op. cit.* p. 65.
2. Nicholson—*Elements of Political Economy.*
3. Fraser, L. M.—*Economic Thought and Language* (1947), p. 180.

ties should be regarded as unproductive. The work of the quack or the one who ferments harmful liquors or drugs, or that of the writer of pernicious books is regarded as productive, as their services are wanted by some misguided people who are prepared to pay for them. In Economics, we are not concerned with the ethical side of the matter. Insurance work and legitimate speculation are to be regarded as productive, because their services are useful to the producers.

We may conclude with Fraser that "all activities which yield a balance of utility *to the agent* irrespective of whether they are a source of utility to the other people," are productive excepting of course criminal or illegal activities.

2. Peculiarities of Labour. Labour is manifestly different from the other factors of production. It is a living thing, and that makes all the difference. Labour is not only a means of production but also an end of production. There are certain characteristics which distinguish labour from the rest of the factors of production :

Firstly, labour is inseparable from the labourer himself. As Marshall says, "The worker sells his work but he himself remains his own property ; those who bear the expenses of rearing and educating him receive but little of the price that is paid for his services later." Many parents are, therefore, either unable or unwilling to invest in their sons.

Secondly, the commodity that labour has to sell must be delivered in person. The environments in which labour has to work are, therefore, of the utmost consequence.

Thirdly, labour does not last. It is perishable. A day without work is gone irrevocably. The perishability of the 'commodity' he has to sell necessitates immediate sale irrespective of the price. As Erich Roll remarks, "he has no reserve price."

Fourthly, labour has a very weak bargaining power. The employers take advantage of the helplessness of the workers and often pay them less than their due.

Fifthly, changes in the price of labour react rather curiously on its supply. In the case of ordinary commodities, supply is directly proportionate to price, *i.e.*, the higher the price the greater the supply, and *vice versa*. But, in the case of labour, a fall in price (*i.e.*, wage) below a certain point may increase the supply. Some of the non-working members of a family, too, may join to earn sufficient income for the family to maintain their minimum standard of living. If price (*i.e* , wage) rises beyond a certain point, supply may contract. It is well known that increased earnings by Indian labour sometimes add to the degree of absenteeism in the factories.

Finally, there can be *no rapid adjustment of the supply to demand.* If, as in depression, demand decreases, supply cannot be contracted, and the wages must fall. During a war, there is increased demand for man-power and wages invariably rise.

The bearing of these peculiarities will be clear when we discuss the determination of wages. The theory of wages would have been different had labour been just a commodity.

Peculiarities of labour are exaggerated. But these peculiarities of labour are often exaggerated. Other factors, too, exhibit these characteristics to some extent. If any other factor is not used, it also deteriorates. To the entrepreneur man is just like a machine, and he substitutes one for the other to the utter neglect of human qualities. The same demand and supply formula, broadly speaking, determines the price of labour. That labour should be treated differently from a commodity is a social rather than an economic question. To the economist, as an economist, social considerations are extraneous and irrelevant. The entrepreneur takes advantage also of the weakness of the sellers of other materials, if they are ignorant and have little staying power. The supply of several other and essential materials too is often inelastic. These so-called peculiarities, therefore, should not lead us to think that laws applying to labour are different from those applying to other factors.

3. Malthusian Theory of Population. Supply of labour is a matter of population. There are two aspects of labour, *viz.*, the quantitative and the qualitative. Both these aspects must be considered in order to have an idea about the labour force of a country. The quantitative aspect leads as to the study of the population theories.

The most well-known theory is the Malthusian theory of population. Thomas Robert Malthus wrote his essay on "Principle of Population" in 1798 and modified some of his conclusions in the next edition in 1803. The rapidly increasing population of England, encouraged by a misguided Poor Law, distressed him very deeply. He feared that England was heading for a disaster, and he considered it his solemn duty to warn his countrymen. He deplored "the strange contrast between over-care in breeding animals and carelessness in breeding men."

His theory is very simple. To use his own words : "By nature human food increases in a slow arithmetical ratio ; man himself increases in a quick geometrical ratio unless want and vice stop him."

"The increase in numbers is necessarily limited by the means of subsistence." "Population invariably increases when the means of subsistence increase, unless prevented by powerful and obvious checks."

Malthus bases his reasoning on the biological fact that every living organism tends to multiply to an unimaginable extent. A single pair of thrushes would multiply into 19,500,000 after the life of the first pair and 20 years later to 1,200,000,000,000,000,000,000, and if they stood shoulder to shoulder about *one in every* 150,000 would be able to find a perching space on the whole surface of the globe ! According to Huxley's estimate the descendants of a single greenfly, if all survived and multiplied, would, at the end of one summer, weigh down the population of China ! Human beings are supposed to double every 25 years and a couple can increase to the size of the present population in 1,750 years !

Such is the prolific nature of every specie. The power of procreation is inherent and insistent, and must find expression. Cantillon says, "Men multiply like mice in a barn". Production of food, on the other hand, is subject to the law of diminishing return. On the basis of these two premises, Malthus concluded that population tended to outstrip the food supply. If preventive checks, like avoidance of marriage, late marriage or less children per marriage, are not exercised, then positive checks, like war, famine and disease will operate.

4. Criticism of the Malthusian Theory. The Malthusian theory of population has had mixed reception at the hands of the economists.

✓(1) The critics point out that Malthusian pessimism is not borne out by history in the Western countries. Population has increased, but it has not outrun the means of subsistence. In fact, the people are now enjoying a much higher standard of living than Malthus perhaps could imagine.

✓(2) Malthus did not foresee that people would make such a fetish of the standard of living that the size of the families would be deliberately restricted.

(3) Malthus thought that the increase in the means of subsistence would increase population. Far from it. Increase in material prosperity has perhaps, by lowering fecundity, checked the growth of numbers.

(4) Malthus laid undue emphasis on the production of food, whereas production of wealth in other forms has been found to be a better way of combating the tendency to lower standards of life on account of increased population. A country can import food from abroad.

(5) The gloomy forebodings of Malthus have been falsified also by the increasing use of contraceptives by the middle and upper classes. The population of the western European countries, especially that of France, has been notoriously stationary.

It is, however, to be regretted that *population is increasing at the wrong end*. The poor people, who can ill-afford to bring up and educate children properly, are multiplying. The rich, on the other hand, who can replenish the better quality stock, are applying brakes on their breeding propensities. The result is the impoverishment of the nation.

✓(6) Malthus does not seem to have grasped fully the fact that the law of diminishing returns can be held in abeyance almost indefinitely. Remarkable developments in agricultural technique, means of communication, exchange, etc., have successfully fought this tendency. Thus "the problem is not one of mere size (of population) but of efficient production and equitable distribution" (Seligman).

Moreover the mathematical proportions given by Malthus have been challenged. But these were apparently introduced for purposes of emphasis and did not form an essential part of his theory.

Malthusian Theory applies to India. In spite of what has been said above, there is a kernel of truth in the Malthusian theory. If population is not checked either by positive checks or by preventive checks, there is no doubt it must outstrip the means of subsistence. The widespread use of contraceptives may be interpreted as a proof of his theory. It shows that the preachings of Malthus have gone home.

We in India find ourselves in that unenviable position which Malthus feared. We have the highest birth-rate and the highest death-rate in the world. We have been increasing roughly at the rate of 1% per annum and what are the consequences ?—grinding poverty, ever-recurring epidemics, famines, communal quarrels, infanticide (at one time) and the lowest standard of living in the world. It is difficult to dispute the truth of Malthus's teaching so far as India, China and other backward countries are concerned.

5. Modern Theory of Population. The Optimum Theory. Modern economists have rejected the Malthusian theory of maximum population, which, if exceeded, will spell misery in the country. Instead of the maximum population, the modern Economists have substituted the idea of the optimum population.

What does the Optimum mean ? By optimum population is meant the ideal number of the population that a country should have, considering its resources. The optimum means the best and the most desirable size of a country's population. It is the right number. When a country's population is neither too big nor too small, but just that much which the country ought to have, it is called the optimum population. Given a certain amount of resources, state of technical knowledge and a certain stock of capital, there will be a definite size of the population at which real income of goods and services *per capita* will be the highest. This is the optimum size. *The optimum number can, therefore, be defined as the one at which per capita income is the highest.*

Under-population and over-population. If the population of a country is below the optimum, *i.e.*, below what it ought to be, then the country is said to be *under-populated.* The number of the people is insufficient to take the fullest possible advantage of the natural and capital resources of the country. This is what happens in a new country. The resources are vast. Much can be produced, but there are not men enough to carry on the work of production efficiently. Under such conditions, increase in population will be followed by an increase in the *per capita* income. But this increase cannot go on indefinitely. When the shortage of man-power has been made up, the *per capita* income will reach the maximum, and we shall say that the optimum has been reached.

If, however, the population still goes on increasing and the optimum is exceeded, then we shall have a state of *over-population.* There will be too many people in the land. The resources will not be sufficient to provide gainful employment to all. They will be thinly spread over the teeming millions. *Per capita* income will diminish ; standard of living will fall ; war, famine and disease will be constant companions of such a people. These are the symptoms of over-population.

We, in India, find ourselves at present in this unenviable position. How can we now get back to the optimum ? We must attack the problem at two ends: (*i*) We must slow down the speed at which we are growing; and (*ii*) we must develop our resources. Ours is a country of unutilised or under-utilised resources. The execution of multi-purpose projects, and development of agriculture, industry, insurance and banking and of the means of transport, etc., are steps in this direction. When we try to keep down our numbers and maximize our productive capacity, we shall be on the road to the optimum.

The following diagram represents the three states: (1) under-population: (2) optimum; and (3) over-population.

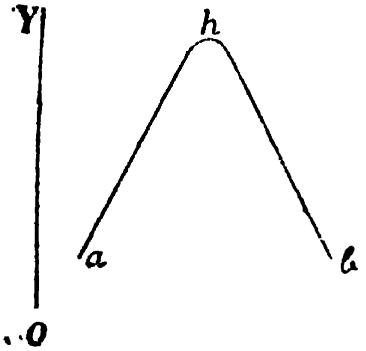

Fig. 25.

We start with *a* (small population). We move up; the population increases and when we reach *h* it is the optimum. From *a* to *h*, it was a state of under-population, and increase therein took us to the optimum *h*. Till we reached *h*, the income *per capita* was increasing, and at *h* it is the highest; when we cross *h*, the *per capita* income starts falling. We have exceeded the optimum population, and we now have over-population. If now we decrease the number, the *per capita* income will increase.

Under-population and over-population are relative terms. They are relative to resources. A country is under-populated because the resources are bigger. If the resources had been smaller, the same population would have meant over-population. Similarly, a country is said to be over-populated because its resources are inadequately developed. With a fuller development of resources the phenomenon of over-population may disappear, though there may be no decrease in population.

Optimum is movable and not fixed. The optimum is not rigidly fixed. It advances and recedes according to the increase or decrease of productive resources of the country. The optimum is not something absolute. It is relative to the resources available. If far-reaching development schemes are completed, the *per capita* income will go up, and we shall have a new optimum at a level higher than the previous one. If, on the other hand, some resources are damaged or destroyed by war or civil commotion, then the present optimum population will become over-population, and the new optimum will be at a lower level.

The conditions in every country are dynamic and not static. Changes are always taking place in the technique of production. More modern appliances are being introduced; new processes and new materials are being discovered; capital is continually growing in volume; natural resources are increasingly being harnessed into service. In these circumstances *per capita* income must increase; but population also increases more or less. Hence what we regard as the right size of the population today may appear to be under or over-population tomorrow. The optimum thus is constantly changing.

Further, the optimum theory tells us nothing about the growth of numbers. It is no theory of population. It is just an application of the idea of optimum to the population of a country.

Dr. Dalton has expressed the theory of optimum population in the formula :

$$M=\frac{A-O}{O},$$

where M=degree of maladjustment
A=actual number
O=optimum number.

If M is positive, it is over-population ; if it is negative it will be under-population ; and, if it is zero, the population will be the optimum.

6. Malthusian Theory and Modern Theory Compared. From the study of these theories, we may notice some important differences between the outlook of those who have put them forward :

1. Malthus focussed his attention on food production, whereas the optimum theory takes into consideration economic deveolpment in all its aspects.

2. Malthus seemed to be thinking of a maximum number for a country which if exceeded would spell misery. According to the optimum theory, there is no rigidly fixed maximum.

3. To Malthus famine, war and disease were the indices of over-population. But the optimum theory tells us that, even in the absence of such distressing phenomena, there can be over-population, provided it can be shown that *per capita* income has gone down, or that with a decrease in population *per capita* income will go up.

4. The modern theory is optimistic whereas the Malthusian theory is pessimistic in outlook. Malthus was haunted by the fear that the population would outstrip food supply. The modern economists do not suffer from any such apprehensions. " Malthus was obsessed by the fear of an impending economic Hell ; the propounders of the optimum theory are elated with the hopes of a coming Paradise." (Chatterjee).

7. Criteria of Over-population. How to know whether a country is over-populated ? Several criteria have been suggested. According to Malthus, operation of positive checks like war, famine and disease are sure indices of a country being over-populated. Besides these, economists may suggest several other tests of over-population ; for instance, persistently unfavourable balance of trade, unemployment, falling living standards and average income and high birth and death-rates.

But a little reflection will show these phenomena may be caused not always by over-flowing numbers but by other factors, economic and political. Adverse balance of trade may be due to increasing investments abroad. Unemployment may be caused by temporary mal-adjustments in the economic system. Similarly, fall in average incomes and hence in living standards may be due to faulty economic policies pursued by the State. High birth-rate may be induced by the requirements of an expanding economy or expanding army. High death-rate may simply be due to the inadequacy or inefficiency of health services of the country.

Thus we cannot offer any infallible guides to the state of over-population. All the same a continued state of under-employment, ill-health and poverty are fairly correct indications of the fact that ever-growing numbers are over-straining the country's slender resources. This is the case in India.

8. Is Increasing Population a Curse ? No. Not always. Nor is increasing population always a blessing. The concept of the optimum enables us to understand the movements in population in their proper perspective.

With regard to India, Darling once remarked that all blessings of nuture or of good government were neutralised by increase in population. India is in fact over-populated. Poverty, of which there is no parallel in the world prevails here. The standard of living is incredibly low ; the death-rate is the highest in the world. The spectre of famine constantly stalks the land which is also disease-ridden. Over-population is a curse for India.

But increasing population is not always a curse. A large population facilitates economic co-operation and stimulates production. There is better scope for division of labour and specialisation. Increasing population provides an ever-expanding market which guarantees safe and profitable investment for capital. Further, growing population makes for adaptability of the economic system. In a country with an ever-increasing population, the new generation is ready to take up new jobs. The system quietly adapts itslelf to the new changes and the new needs.

But increasing population is desirable only when population is less than the optimum, i.e., when the man-power is not available in such proportions as to make for proper economic exploitation of the resources of the country. If the population is already in excess of the optimum, then a diminution thereof will be desirable.

Which is therefore better—Increasing or decreasing population ? We cannot dogmatise. It all depends on what the present state of population is. If it is less than the optimum, increasing population will be better ; and if it is more than the optimum, then a decrease is desirable. What is needed is a movement towards, and the attainment of, the optimum.

9. Net Reproduction Rate. If a nation is desirous of economic betterment, it must constantly watch the population pulse and avoid landing into over-population. For assessing the increase in population, a new method has been popularised by Kuczynski. It relates to the finding of the net reproduction rate. To a superficial observer, it would seem that the excess of births over deaths represents the net increase in population. But this is wrong. The margin between birth-rate and death-rate in France and the U.K. for 1940 is respectively 2 per thousand and 5 per thousand, indicating an increase in population. Actually these countries represent a declining population. This is shown by Kuczynski's new method.

Kuczynski describes the method thus : "The pertinent question is not : is there an excess of births over deaths? but rather, are natality and mortality such that a generation which would be permanently subject to them would during its life-time, that is before it has died out, produce sufficient children to replace that generation ? ....Since we are concerned here with birth-giving only, it suffices to take into account the female, population. The pertinent question then is : are natality and mortality such that 1,000 newly-born girls will in the course of their lives give birth to 1,000 girls ? ....It becomes necessary, first to ascertain on the basis of present mortality how many out of 1,000 newly-born girls reach child-bearing age, that is 15 years, how many reach 16 years, etc., finally how many pass through the child-bearing age, that is 50 years.[1] In short, we have really to find how many females are born of the original stock of 1,000 girls. If 1,000 girls of child-bearing age survive per 1,000 girls born, then the population is stationary ; if larger than 1,000 survive then the population is increasing, otherwise it is decreasing. "*The rate at which the female population is replacing itself is the net reproduction rate.*"

In the words of Dr. Erid Charles, " The main point is that by itself the number of births in a year is not an index of the reproductive capacity of a population, because human beings are only capable of becoming parents during a part of their lives." Thus arithmetical calculation based merely on birth-rate and death-rate is not enough. We have to consider the frequency of births in each child-bearing group and, considering the death-rate, the chances of survival in each group. Then only can we find the net reproduction rate.

We owe to Mr. Yeats, who was the Census Commissioner for India in 1941, the calculation of our net reproduction rate. The following table[2] shows the method :—

GROSS AND NET REPRODUCTION RATE IN INDIA

Age Group	Total number of children born per 1000 women passing through each group	Number of female children born per 1000 women passing through each group	Number of survivors of each 1000 female children born	Number of surviving women by whom present women replace themselves
1	2	3	4	5
15—20	691·2	332	548·94	182
21—25	1670·2	803	499·37	401
26—30	1556·5	748	447·95	335
31—35	902·2	634	394·38	171
36—40	430·5	207	339·77	70
41—45	188·8	91	285·32	26
46—50	79·9	38	234·01	9
	5519.3	2853	2749.74	1194

Gross reproduction rate is given by column 3 showing the number of female children born per 1,000 women.

It is $\frac{2853}{1000}=2{\cdot}853$.

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[1] Kuczynski—*Balance of Births and Deaths*, pp. 41-4, quoted in *Economic Problems of Modern India* edited by Prof. Radha Kamal Mukerjee, pp. 90-1.

[2] Brij Narain—*Indian Economic Problems, Pre-War and Post-War*, p. 10.

The net reproduction rate is shown by column 5, *i.e.*, the number of surviving women by whom present women replace themselves. It is $\frac{1194}{1000}=1{\cdot}194$. This means that one woman is replaced by 1·194. Instead of 1,000 women there are left 1,194 women. This shows an increasing population.

The gross and net reproduction rates are given per unit and not per 1,000 or 100.

The following are the net reproduction rates of some other countries[1]:

Country	*Year*	*Net Reproduction*
U.S.A.	1939-41	1·01
Japan	1937	1·44
France	1939	0·9
Germany	1936	0·93
Italy	1935-37	1·13
U.K.	1944	0·99
Soviet Union	1935	1·4
Sweden	1941	0·84

It is clear that France, England, Germany and Sweden have the net reproduction rate as less than 1·0. They represent a declining population. For example, in England 990 women survive per 1,000. In Italy, Soviet Union and Japan the net reproduction is greater than unity which means increasing population. In the U.S.A., the net reproduction rate balanced round about unity which means practically stationary population.

10. Factors of Labour Efficiency. We have considered above the quantitative aspect of labour, *i.e.*, the problem of numbers. But mere number cannot give a correct idea about the labour force in a country. We must also consider the efficiency of the people *i.e.*, the qualitative aspect. Let us now turn to the qualitative aspect, *i.e.*, the problem of efficiency.

It goes without saying that efficient labour is a great national asset. It is a powerful instrument of economic regeneration. Economic prosperity of Japan is very largely due to the patriotism and efficiency of Japanese labour. An efficient worker does not waste time or materials; he uses machinery with care. He requires much less supervision. He works more intelligently and shows greater initiative and sense of responsibility. There is increased output at reduced cost which increases the competitive strength of the industry.

There are several factors which explain the relative efficiencies of the workers in different parts of the world, or even in different parts of the same country. The following are some of the main factors which affect labour efficiency :—

(1) *Racial Qualities.* Labour efficiency largely depends on heredity and the racial stock to which a worker belongs. The Jat of the border districts of the Punjab is very sturdy, strong and enterprising. The Bengali, or a worker from the U.P. is no match for him in physical endurance. This is due to the racial qualities.

(2) *The Natural and the Climatic Factor.* A cool bracing climate is conducive to hard work, whereas the tropical climate is enervat-

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[1] Samuelson, P. A.—*Economics*, (1948), p. 29.

ing. Where sustenance has to be wrested from nature by persistent efforts, the human stock is superior to that where nature is bountiful. Thus the inhabitants of cold and temperate regions are more efficient than those of the tropics or sub-tropics. That is why the European labour is more efficient than Asiatic labour.

(3) *Education—Technical and General.* Efficiency also depends on education. Education stimulates and strengthens the right type of instincts and builds up character. There is not the least doubt that an educated worker is more resourceful and behaves in a more responsible manner. A technically trained hand is bound to be more efficient.

(4) *Individual and Personal Qualities.* A worker's efficiency also depends upon his personal qualities. If a worker has a stronger physique, mental alertness, intelligence, resourcefulness and initiative, and if he is sober and possesses a higher sense of responsibility, he will be more productive.

(5) *Industrial Organisation and Equipment.* The level of organisation and the nature of equipment supplied to the workers, too determine their efficiency. A second-rate entrepreneur using second-hand machinery and third-rate materials cannot turn out first-rate products. Efficiency is bound to be lower in these circumstances.

(6) *Factory Environments.* If the surroundings are depressing, labour efficiency must be low. Cramped and ill-ventilated factories, situated in crowded and insanitary surroundings, cannot call forth the best endeavour on the part of the workers. This is the situation in Indian factories where labour efficiency is bound to be low. On the other hand, cheerful and bright environments are conducive to much better work.

(7) *Working Hours.* Efficiency also greatly depends on the number of hours that the workers are called upon to put in. Long hours, with no suitable pauses and leaving no time for relaxation or recreation, cannot but impair labour efficiency. That is why Indian labour is less efficient.

(8) *Fair and Prompt Payment.* A well-paid worker is generally contented and puts his heart into the job. This is especially so if the wages are promptly and punctually paid. A good wage will ensure an adequate supply of food, clothing, and healthy housing conditions which must improve efficiency. In India wages are low but the Payment of Wages Act, 1936 ensures prompt payment.

(9) *Labour Organisation* An organised effort is always more effective. If labour is properly organised both inside the factory through a proper division of labour and outside in the form of a strong trade union, their efficiency will undoubtedly go up.

(10) *Social and Political Factors.* Social security schemes guaranteeing freedom from want and fear, and which remove the dread of unemployment that always hangs over head like Damocle's sword, are bound to invest labour with dignity and respect. They will be in a good mood to work harder and to give their best to the community. There is no Social security worth the name. Only recently

the Employees' State Insurance Scheme and Provident Fund Scheme for workers, have been introduced.

Why Indian Labour is less efficient. It is well to remember that producton is a co-operative effort and labour efficiency does not merely depend on the personal qualities of the workers. The Indian labourer is comparatively less efficient, not on account of some inherent deficiencies, but because of the natural and environmental factors. He lives in an enervating climate which gives him a poor physique. Extreme heat and cold render the factory work a great ordeal. The mere pittance that he gets enables him just to eke out a miserable existence. The factory conditions are very depressing and alien to his natural tastes. The entrepreneurial skill and factory equipment are of a low order. Labour is condemned to long hours of work. They are illiterate and conservative. Conditions being as they are, it is really surprising that the worker is able to do even the amount of work that he is doing.

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CHAPTER IX

MACHINERY AND DIVISION OF LABOUR

1. **Use of Machinery.** Modern age is the age of machinery. The machine dominates even the man. Machines of enormous power, of wonderful delicacy and of amazing intricacy have taken possession of almost the entire productive system.

Its Uses. The contribution made by machinery has been summed up in two words: Power and Precision.[1] The advantages can be traced in the *improvement of the products, the relief to the worker* and in the *general welfare of the community.*

It is only through machinery that man has increased his *mastery over nature,* so that her stupendous forces have been harnessed to the service of humanity.

Physical limitations of time, space and gravity are fast disappearing. The possibility of a journey to the moon is not altogether ruled out. *Human hands could not work so fast.* A cigarette factory can produce 250,000 cigarettes in a minute. The machine works with *wonderful precision* so that every article turned out is exactly like another. Without such a standardised production, the modern industrial system would not work. Process in different industries being very similar, *labour has been given added mobility.* By the *production of cheap and serviceable articles,* and by the extension of transport facilities, the community has benefited immensely. *The worker has been relieved of arduous and disagreeable work.* He has got more leisure by the shortening of the working day. *The level of his intelligence, skill and dexterity has gone up.* A dull worker cannot properly handle the machinery.

Its abuses. But there is the other side too. *Congested, dingy and insanitary cities, overcrowded factories* with all their attendant *dangers to human morals, exploitation of women and children, loss of independence by the craftsman* are some of the by-products of the use of machinery. The *craftsman has been reduced to the position of a machine tender.* We know to our cost how machine competition from abroad *destroyed our indigenous industries* and the producers of Dacca muslin swelled the ranks of unskilled labourers. Man is treated as a mere cog in the machine. *Artistic production has disappeared.* Shoddy and unreliable goods produced for profit have flooded the markets. All *evils of the factory system and capitalism* are laid at the door of machinery.

Does Machinery Create Unemployment? How far is machinery responsible for the displacement of labour? No doubt, *the immediate effect of machinery is the displacement of labour.* Those who are displaced, especially the old hands, may never again get an equally good job.

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[1] **Cairncross—*Introduction of Economics* (1944), p. 46.**

However, adjustments are sure to be made some time, and *in the long run, there will be a much larger volume of employment.* Who can doubt that England today provides employment for an infinitely larger mass of people than it could do before the industrial system ? More employment is created in this way : machine-made goods are cheaper ; demand for them increases and the larger volume of production will re-absorb some displaced persons; or demand for some new goods will be created, and workers will be required to make them. If people do not buy more goods, they will save money : capital will accumulate and more industries will be started. Workers will be needed for making machines, for repairing them and for doing so many allied jobs. Hence we may conclude that *immediately* machinery may displace labour, but *ultimately* it will create more employment.

2. Division of Labour. Besides the extensive use of machinery, another outstanding feature of modern production is the division of labour. As a matter of fact, division of labour and the use of machinery go hand in hand. We find today that *the making of an article is split up into several processes and each process is carried out by a separate group of workers.* This is called division of labour. It may more appropriately be called specialisation.

The division of labour may be (*a*) simple division of labour, when a job is done jointly, and it is not possible to say how much each person did, *e.g.*, lifting a heavy load ; (*b*) complex division of labour, when each process is done by a separate group; and (*c*) territorial division of labour when a certain locality specializes in the production of a certain commodity. This is also known as localisation of industries.

3. Advantages of Division of Labour. Several advantages are claimed for the system of division of labour. Adam Smith's contribution to this part of the economic theory is still regarded as classic. Division of labour has proved beneficial in the following ways :—

(1) *Increase in Productivity.* Adam Smith takes the example of the pin-making industry to illustrate the immense increase in productivity. He describes pin-making as divided into 18 distinct operations. Then men can make 48,000 pins in a day ; one worker may, therefore, be considered to have made 4,800 pins in a day. In the absence of division of labour and machinery, one man could scarcely have made one pin in a day, and certainly not twenty.

Is increase in productivity due simply to division of labour ? It is wrong to attribute the entire increase in productivity to division of labour alone. The advancement of technical knowledge, various inventions and discoveries and the accumulation of capital are the other important factors which have added to the productive capacity of the community. Science has enhanced the productive capacity of land and education has improved the quality of the human factor. All have combined to increase productivity.

(2) *Increase in dexterity and skill.* Practice makes a man perfect. After repetitive performance of the same task, a worker becomes an expert.

(3) *Inventions are facilitated.* The movement becomes mechanical and the worker can freely think while at the job. New ideas often occur leading to inventions.

(4) *Introduction of machinery facilitated.* When a man is doing the same job over and over again, he will be able to think of some mechanical contrivance to relieve himself. A machine is bound to take over this simple movement sooner or later.

(5) *Saving in time.* Under the system of division of labour, a worker has only to do one process or a part of a process. Less time is needed to learn a specialized trade.

(6) *Saving in tools and implements.* When a worker has to perform a part job only, *e.g.*, making the legs of a chair, he need not be supplied with a complete set of tools. One set of tools can serve many workers at the same time.

(7) *Diversity of employment.* Division of labour increases the number and variety of jobs, and employment is diversified.

(8) *Large-scale production.* Division of labour involves production on a large scale. The community reaps all the economies of large-scale production.

Production improves not only in quantity but also in quality since goods are made by specialists in their jobs.

(9) *Right man in the right place.* Under division of labour, workers are so distributed among the various jobs that each worker is put in the right place. There are no round pegs in square holes.

4. **Disadvantages of Division of Labour.** We have seen that division of labour enhances the productive capacity of the community. But as Chapman puts it, " Productiveness of a method of production is not the sole test of its value—to get many commodities is not the only end in life." We have rather to see how man, for whom production is meant, has been affected by the division of labour. Considered in this light, division of labour has not proved to be an unmixed blessing. The following may be mentioned as some of the disadvantages of division of labour :

(1) *Monotony.* Under division of labour a worker has to do the same job over and over again. The work becomes monotonous. It is drudgery, pure and simple. The work ceases to be interesting.

(2) *Retards human development.* A person's development, physical and mental, is greatly affected by the job he is engaged in. Under division of labour, a worker has to repeat the same movement. His muscles and mind move in the same direction. Repetitive movement cramps a person's mind and narrows his outlook. Monotony is soul-killing.

(3) *Industry de-humanised.* Under division of labour many people combine to produce an article. " Everybody's business is nobody's business." The worker loses all sense of responsibility and pride in his work. The industry is thus de-humanised.

(4) *Loss of skill.* The master craftsman loses his skill. He

knows only *either* spinning or weaving, making the legs of the chair *or* its seat ; he does not know how to make the whole chair.

(5) *Risk of unemployment.* Knowing only a part of the job, the worker is in danger of becoming unemployable. If he happens to lose his present job, he may not be able to get similar job elsewhere. He thus becomes unemployable.

(6) *Disrupts family life.* Division of labour facilitates employment of women and children. The influx of women into the factory disrupts domestic life and the employment of children involves the deterioration of valuable human resources of the nation. It is a great national loss.

(7) *Division of labour and the evils of the factory system.* Division of labour is associated with the factory system which has given rise to many evils. The countryside is contaminated with foul smell ; overcrowding endangers morals ; and insanitary surroundings spread disease. Man becomes a slave of machine and of the factory owner.

Division of labour has, however, come to stay. Shortening of the working day thus increasing leisure, diffusion of education and raising of remuneration are some of the measures that can be adopted to counteract the bad effects of division of labour on a worker's life and personality.

Does it mean that under the system of division of labour, a worker is put on the work for which he is best fitted ? Not necessarily. The employer, of course, tries to put every worker on the job for which he is best fitted. But it may not be always possible. It depends on demand. Of the several alternative jobs that he may be able to do, he will get one for which demand exists, and this may not happen to be his best.

Requisites of Division of Labour. Introduction of division of labour depends on certain conditions. There must be large-scale production.

Production must be continuous, otherwise the work of the different groups of workers will not be properly co-ordinated.

Moreover, workers must show *spirit of co-operation and intelligence.*

It is also necessary that the entrepreneur should have the requisite organising ability, otherwise division of labour cannot be properly arranged or organised. Finally, the limiting factor is the extent of the market.

5. **Division of Labour is limited by the Market.** This is so obvious. If a shoemaker is able to dispose of one shoe in six months, it will look foolish for him to employ half a dozen persons on the making of soles, half a dozen on the making of uppers, and another six persons in joining them. There must be adequate demand for his product before he can adopt such methods. Division of labour implies large-scale production, and it is meaningless to produce more in the absence of a sufficient market for goods. The limiting factor for the introduction and extension of labour is, therefore, the existence of a wide market.

But no individual entrepreneur looks at the matter like this. He considers the market while fixing the size of his plant, and when he has done that the extent of the division of labour will depend on the nature of the machinery installed and the number and the variety of the people employed. It will depend also on entrepreneur's own organising ability.

Market also depends on division of labour. Under division of labour, production is done on a large scale, which means cheaper production. When goods are cheap, more people will buy them. Thus the boundaries of the market are extended. Hence division of labour and the market are interdependent. But it is more true to say that division of labour is limited by the extent of the market.

TERRITORIAL DIVISION OF LABOUR

6. Localisation. Localisation of Industries is also called territorial division of labour. By localisation we mean the establishment of an industry in a certain place or region. A certain town or territory comes to specialise in a certain industry. Our jute industry is centred in Bengal, iron and steel industry in Bihar, sugar industry in U.P. and Bihar, cotton mill industry in Bombay, and so on. As instances of localisation in State towns, we may mention hosiery industry of Ludhiana (Punjab), bangles in Ferozabad (U.P.), silk manufactures in Hazaribagh (Bihar), etc.

Among the chief factors that govern localisation may be mentioned the following :

1. *Nearness to Raw Materials.* To have raw materials near at hand is a great advantage. Transport costs will be considerably reduced. Production will be more economical. It is not surprising that most of the industries have been started in the regions where abundant supplies of raw materials are available, *e.g.,* jute mills in Bengal and sugar mills in U.P.

2. *Nearness to Sources of Power.* Another attraction for the industries is the availability of power resources. If coal-mines are near, several industries will soon crop up, *e.g.*, iron and steel works and several other industries in the coal regions.

3. *Proximity to Markets.* It is advantageous for an industry to have a wide market at hand. There will be much saving in the cost of transport. The factories near the consuming centres have a great pull over those situated at a distance. The expansion of the Indian cotton mill industry to North India and to Bengal has been actuated by a desire to be near the markets.

4. *Availability of Labour.* If trained labour is available, it is counted as a great facility. That is why new industrialists flock to old established industrial centres. If somebody wants to start a hosiery industry, he will find it to his advantage to start it at Ludhiana.

5. *Availability of Capital.* Finance is the very breath of industry. Where there are banks and other financiers ready to assist industry it will be a great attraction. Cities like Bombay and Calcutta are the centres of industry, because they enjoy better credit facilities.

6. Sometimes the *political factor* is responsible for the establishment of an industry. Some of the Indian States, like Hyderabad,

offered special concessions and facilities to industrialists to attract them.

7. In some cases *religious causes*, making for large assemblage of people, give rise to some industries.

8. It is sometimes not possible to point to any particular cause except the *momentum of an early start* : the industry just happened to be started there.

Causes of further Concentration. After the industry has got going in a certain place, it then has a tendency to stick to and further gravitate to that place. If any new entrepreneur wants to enter in the industry he, too, will go to that place to start his business rather than start it elsewhere. Several reasons account for this tendency : Trained labour is readily available there. Plant and accessories and raw materials can be conveniently had. Financing agencies have also properly developed in that place. Several supplementary and subsidiary industries are established in course of time, and they are a valuable aid to the main industry. Technical journals are published which are found useful by the industrialists. Associations of entrepreneurs are formed to safeguard and promote common interests. Means of communication and transportation become specialised and adapted to the needs of the industry. All these factors considerably assist the entrepreneurs. In a new place, they will find even easy and ordinary problems difficult of solution. Above all, there is what is called industrial inertia. Once established in a place, they do not like to move out. It is human nature that one is prepared to put up with known difficulties rather than face unknown ones.

7. **Consequences of Localisation.** Localisation has benefits as well as disadvantages. All the factors mentioned above as the causes of persistence of an industry, are the several advantages afforded by the place in which it has become localised, *viz*, availability of labour, capital, materials, etc., and the benefit of specialised transport, subsidiary industries, technical journals, associations, etc. Besides, there are ample opportunities for exchange of ideas : quality can be improved, costs lowered and common problems thoroughly thrashed and successfully solved. Labour of that category will be sure to find employment in that place.

Localisation, however, is not an unmixed blessing. Dependence of a place on one industry is dangerous. If the industry happens to be in a depressed state, all the people depending on the main as well as subsidiary industries will suffer. It is like placing all the eggs in one basket.

Further, there is little scope for the employment of any other type of labour.

The specialised labour loses mobility and may not find alternative openings.

The obvious *remedy* is the one that is generally adopted, *viz.*, to start supplementary and subsidiary and other allied industries.

8. **Decentralisation of Industry.** Several developments have

taken place in modern times which have plucked out old industries from their native soil and planted them in other lands.

1. *The development in the means of transportation* is one such factor. This development is really a double-edged weapon. On the one hand, it has helped the localised industries to keep to their original home. If the supply of raw materials, on the basis of which they originally developed, has been exhausted, the materials can be brought there. If the market, originally wide enough, is no longer adequate, distant places can now be tapped through improved transport. But on the other hand, it has helped the transfer of heavy plant to distant countries which are better markets, *e.g.*, Swedish match factories have been started in India. Labour and technicians can also move out.

2. Further, the *rise of rents, congestion, high land prices and higher municipal taxation* in the industrial centres have driven out the industry, *e.g.*, cotton mills have been shifting from Bombay to Ahmedabad, Sholapur and other places.

3. Finally, the *advent of electricity*, which can be carried to a distance has enabled the industries to start at more convenient places. They need no longer cling to the source of power, say, coal mines, and suffer from other handicaps.

Owing to the causes stated above, several of the factors, which were responsible for localisation, have ceased to operate and the industries have been decentralized.

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CHAPTER X

CAPITAL

1. Capital, its Nature and Importance. We have considered so far two agents of production, land and labour ; and now we turn to the third, *viz.*, capital. Capital plays a vital role in the modern productive system. Even in the primitive stage man used some tools and implements to assist him in the work of production. The wide range of modern production as well as the mass scale on which it is carried on, are all due to the help that production receives from capital. Standard of living can be maintained and improved if a nation has at its command sufficient amount of capital. Economic development in any direction needs capital goods. Machinery is needed to carry out irrigation projects, and tractors for agriculture. Machinery is also needed to accelerate industrial development. Machinery is needed to construct roads too. Thus it is impossible to advance economically without adequate capital.

In the absence of capital, land will lie barren, labour will remain idle, and organizers will be seriously hampered in their productive enterprises. Capital oils the wheels of the productive machine. Thus the role that capital plays in production cannot possibly be overemphasized.

Widely different views are held by economists about the concept of the term 'capital.'

The essence and nature of capital is very clear. It is correlative to income. *Some part of man's wealth is so kept or utilized as to bring him an income or assist him in the productive process.* This part of his wealth is known as capital. In the words of Chapman, capital "is wealth which yields an income or aids the production of an income, or is intended to do so."[1] Thus it includes railways, ships, canals, factories and all types of tools, implements and machinery as well as investments in stocks, shares and securities and bank deposits. Pigou likens capital to "a lake into which a great variety of things, which are the fruit of savings, are continuously being projected. All things that enter the lake eventually pass out of it again."[2]

Let us examine the case of some goods and see whether they are capital or not. About *producers' goods* like machinery, transport equipment, and *consumers' goods in the hands of the producers* for the purpose of aiding production, there cannot be the least doubt. But what about the *consumers' goods in the hands of the consumers* ? There are two views on the point : some economists hold that they are not capital, the reason being that so far as they are concerned production is complete, and there will be no further financial transactions. Benham replies to this argument by saying that although these goods have

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1. Chapman—*Outlines of Political Economy* (1920), p. 73.
2. Pigou—*Economics of Welfare*, p. 43.

reached the consumers, yet the matter does not end there. They will still continue to yield a flow of service for many years as in the case of durable goods like houses, furniture, radio sets, etc. Also, that some further transactions are still possible. One may decide to let out his house or use his car as a taxi. To Benham it seemed odd that a doctor's car should be regarded as capital when he goes to visit a patient and not capital when it is used for the family for an outing. He would, therefore, regard all these goods as capital.

Is land capital ? Land is not regarded as capital because (*a*) land is a free gift of nature but capital is man-made or is a 'produced' agent of production ; (*b*) capital is perishable, whereas land is indestructible and permanent ; (*c*) capital is mobile but land has no mobility ; (*d*) the amount of capital can be increased but the quantity of land is fixed and limited ; and (*e*) income from capital is uniform, whereas rent of land varies.

But these differences are exaggerated. A very important element of land is also man-made. Man has turned deserts into fertile lands. Like capital, land is also perishable to some extent, for repeated cropping destroys its productivity. We may not be able to increase the land surface, but we can increase its productivity. In is just like increasing the area. Land is also mobile in the sense that the products of land can be transported from one place to another. It would be more logical to regard land as capital from the individual point of view. The difference between land and capital is not of a kind but of a degree only. But although peculiarities of land may be exaggerated, yet the fact remains that land is not the same thing as capital. There are some fundamental differences which make capital a distinct factor of production.

Is money capital ? Money and capital are not synonymous. Whereas all capital may be money, all money is not capital. Before money can become capital, it must be invested and used for productive purposes.

What about the capital value of National Debt ? From the point of view of the stockholder, it is certainly capital, because it yields an income. But from the point of view of the government it represents a debt. To the extent that the national debt is invested in roads, railways, canals or other income-yielding assets it is capital. But if the national loan has been spent on war, *i.e.*, for destructive purposes, it cannot be truly called capital.

Are personal qualities like a surgeon's skill or a typist's dexterity capital ? No. We have already excluded these qualities from the category of wealth on the ground of their being not transferable. Some economists are prepared to give it a courtesy title of personal capital.

What about the free goods like rivers and mountains ? Again, it seems illogical to regard canals as capital and exclude the rivers from this category. But such things are not capital because capital refers to 'produced' agents of production and not to the gifts of nature.

Is all wealth capital ? There is a view which regards all *wealth as* capital on the ground that everything that a man possesses does directly or indirectly exercise some influence on the production of wealth. Anything, the presence of which helps in production and the absence of which retards it, must obviously be regarded as capital. There is another argument to support this view. Everything yields a flow of satisfaction, *i.e.*, income, and hence everything must be regarded as capital. But the generally accepted view is that only *that part of wealth is regarded as capital which is used in production of further wealth. All capital is wealth, but all wealth is not capital.*

Capital may be distinguished from capitalism. Capital, as we have seen, simply refers to the instruments of production. Capitalism, on the other hand, refers to the system of society in which these instruments of production are owned and managed by private individuals for their exclusive benefit. They have been placed in a position to exploit the masses. The rich people have a tendency to become richer still, whereas the poor are on the downward path, so that the gulf between the lucky few and the unlucky many threatens to become wider and wider. Such a system deserves to be condemned. But the condemnation of capitalism does not amount to the condemnation of capital as such.

Capital has been variously classified. The distinction between private or individual capital, social capital, national capital and personal capital is analogous to such distinctions in the case of wealth (Ch. II, Sec. 5). *Working capital* means the amount of cash which a businessman uses in running his business.

Fixed Capital consists of durable producers' goods like the factory building, plant and machinery which are fixed up permanently and give service for a number of years continuously.

Circulating Capital is not of lasting nature. It is finished up in a single process. It consists of raw materials used in production. The implements of agriculture are fixed capital, and money used for paying wages and maintenance of labour is circulating capital. The livestock used in agriculture is fixed capital, its maintenance is circulating capital. The stock reared for sale is circulating capital. But cattle kept for dairy purposes are fixed capital. The same thing may be fixed capital for one man and circulating for another. The sewing machine, from the sale of which the company get's profit, is circulating capital, but to a tailor it is fixed capital.

Sunk Capital is that capital which has become specific or specialised and is not capable of being put to alternative uses, *e.g.*, capital invested in an ice factory cannot be used, say, for a hosiery mill.

Floating Capital is in a form that is capable of being used for several purposes, *e.g.*, money, fuel, raw materials, etc.

2. Functions of Capital. From the classification of capital given above, some idea can be had as to what functions capital is expected to discharge in modern production. Capital is at the service of the entrepreneur.

He utilises it, *in the first place*, for the purchase of instruments of production, *e.g.*, tools and machinery, for the erection of factory buildings, etc.

Secondly, the entrepreneur provides himself, by the aid of the capital he owns, with the necessary raw materials to be used in the manufacture of finished goods.

Finally, capital is also used in providing means of subsistence, *i.e.*, consumers' goods, for all those who are actually engaged in the work of production.

The point need not be laboured that all these functions are indispensable, and production without capital must come to a standstill. A nation without capital must be a nation condemned to irreparable misery and poverty.

Roundabout Production. The longest way home really turns out to be the shortest. The modern capitalistic production is said to be a roundabout one. More factors of production are devoted to the production of instruments of production which are later used in turning out articles for direct consumption. A very samll proportion of the people seems to be engaged in the production of consumers' goods. The primitive hunter just picked up a stone or a stick and killed his game. But, as Chapman says, the huntsman of today begins his hunt, so to speak, by mining ore which he afterwards smelts and shapes into weapons of the chase.

There is no special charm in the adoption of the roundabout method. They are adopted because roundabout methods are more productive and make a better contribution to the satisfaction of the community's wants.

Mere roundaboutness is no special qualification. As Chapman remarks, " A process is not more economical because it is more roundabout. But it happens that the more economical ways of doing things are frequently the more roundabout." Dr. Hayek compares the capitalistic method to " a fan which opens and closes as the methods employed are more or less capitalistic and clearly the more the fan opens, the greater the interval of time between the placing of the raw materials and the marketing of the final product".

3. **Capital Formation.** A Robinson Crusoe must accumulate a store of food before he can think of devoting a few days to the making of a hunting piece. There is an old Chinese proverb (quoted by Samuelson) : " He who cannot see beyond the dawn will have much good wine to drink at noon, much green wine to cure his headache at dusk, and only rain water to drink for the rest of his days". *Abstinence or waiting is said to be the origin of capital*. But in the case of rich people, who go on saving almost automatically after indulging in all sorts of conceivable luxuries, there is no pain or sacrifice which the word ' abstinence ' implies. Hence 'waiting' is a better word.

Starting with a few crude implements of the primitive era, capital has assumed the form of mammoth machines through the inventions and discoveries of centuries.

All this is the result of saving. As Taussig says, " Capital is made or created. But capital is also saved and accumulated." Broadly speaking, accumulation of capital depends on *Power to save and Will to save.*

Power to save, in the case of an individual, depends on the surplus of income over expenditure. In the case of a nation, it depends on the efficient organisation of trade and industry, development of the means of communication and transportation and the gearing up of the credit and banking machinery. Capital also grows by the fullest exploitation of natural resources and the highest development of the human resources through a sound system of education and public health.

The will to save depends on the various motives which actuate human beings to save. The most important of these motives are family affection, the desire to rise in the estimation of one's fellow beings and to acquire social and political influence, or merely the desire to win success, etc.

The security of life and property provided by a stable government strengthens both the will and the power to save, so also the *various channels of investment, e.g.*, banks, insurance companies, existence of sound commerical enterprises, the issue of government securities, etc.

High *rate of interest* also acts as a powerful lever for saving. Many more people are induced to save when interest rate goes up. But the influence of rate of interest on saving is exaggerated. Not many who save really think of the rate of interest. For the rich people saving is almost automatic, and for the poor a few annas of interest are no attraction. On the contrary, some people who wish to provide for a fixed income for themselves in old age or for their dependants, would save more when the rate of interest is low, and *vice versa.*

What is the effect of social legislation like social insurance and old-age pensions on saving ? Possibly the workers may feel so secure that the edge of the desire to save is blunted. But we believe that the urge for saving is quite deep-rooted. People always save if they can.

Saving is no doubt the source of capital. As Adam Smith remarks : "Capitals are increased by parsimony and diminished by prodigality." But it will be appreciated that *mere saving is not enough.* In order to turn saving into capital a further step is necessary, *viz.*, investment.

But too much saving is bad. It will reduce demand for consumer's goods and bring about depression. Too much spending is bad too, it will mean no provision for the future. There should be a proper balance between the two.

Capital formation involves three broad stages : (*a*) The creation of savings which depends upon the will to save and the power to save ; (*b*) mobilization and canalization of savings converting them into investible funds, which depends on the efficiency of the banking system ; and (*c*) acquisition of capital goods which depends on the entrepreneurial enterprise. There are a few hurdles in the way of capital formation. Some savings may be hoarded and not made available for investment. Some savings may be ploughed back into business by the owners. There is also a time lag between the accumulation of funds and acquisition of capital goods.

Several factors have militated against capital formation in India. The Liaquat Ali budget, 1947-48, imposing high taxes on industry, dread of nationalisation, speculation on stock exchange, malpractices of enterprises, control of capital issues are some of them. The net domestic capital formation in India was estimated for 1953-54 at Rs. 719 crores which forms about 6·8% of national income for the year and for 1954-55 Rs. 749 crores or about 7·8% of national income. It was 5·1% for 1948-49.

It is very necessary to maintain capital intact. By consuming its capital a community may be able to raise its standard of living but this path leads to national bankruptcy. The capital of the community, the accumulated outcome of efforts and sacrifices of centuries, will have disappeared. In Pigou's words, " The outgoing stream will diminish to a smaller and smaller trickle, until with the demise of the longest-lived item, it and the lake from which it comes alike go dry." Hence by means of repairs, renewals and replacements at least the existing capital must be maintained intact.

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CHAPTER XI

THE ENTREPRENEUR AND HIS PROBLEMS

1. **Entrepreneur's Role.** In the earlier stage of economic evolution, the independent worker owned his own land or workshop, supplied his own capital, worked with his own tools, planned the operations himself, and stood by the result of the venture. He was, in short, the landlord, the labourer, the capitalist and the entrepreneur all rolled in one. But considering the complexity and the scale of production today and the nature and magnitude of problems involved in modern production, undertaking of all these responsibilities by one man is out of question. Hence the emergence of the Entrepreneur. Factors of production are today divorced from one another. Land, labour and capital are all separately owned and lie scattered. The entrepreneur brings them together and harnesses them to the work of production.

The entrepreneur specialises in the work of organisation. He may own no land of his own and probably no capital, and he will not be expected to labour in the ordinary sense of the term. He possesses one thing, *i.e.*, organising ability. He will be able to get land on rent, borrow capital, hire labour and use each in the right proportion so as to yield the best results. That is how he organises production.

The role that the entrepreneur plays consists in co-ordinating and correlating the other factors of production. He starts the work, organises and supervises it, and faces the issue. He undertakes to remunerate all the factors of production : to pay rent to the landlord, interest to the capitalist, and wages to labour, and pays them in advance of the sale of goods. The residue, if any, is his. Nothing may be left after he has made the necessary payments. In that case, his venture will have been miscarried. But it is also possible that he may be lucky to make a handsome profit. Whatever may be the outcome, he must be prepared to accept it. He thus takes the *final* responsibility of the business.

If he has anticipated the consumers' wishes aright and interpreted them correctly, he is amply rewarded. Thus *organising* and *risk-taking*, or ' uncertainty bearing ' as it is sometimes called, are the two chief functions of the modern entrepreneur.

A successful entrepreneur must have tact, patience, sagacity, powers of observation and discrimination. He must be a good judge of human nature and possess qualities of leadership. It indeed needs a rare combination of the qualities of head and heart which will make a successful captain of industry. That is why there are not many Birlas, Dalmias, Tatas and Thapars in India.

2. **Delegation of the Entrepreneurial Functions.** Certain developments have taken place in the business world on account of which it has been possible for the entrepreneur to delegate some of his functions.

There was a time when the entrepreneur initiated, organised, directed and financed the enterprise. He also took the entire risk. The two functions of organising and risk-taking were indissolubly bound up. But since the advent of the joint-stock company, we have witnessed a splitting up of the functions. The golden rule " control goes with risk " has been broken.[1] An entrepreneur of proved capacity and known integrity will not find much difficulty in raising the entire capital from others. Further, he may initiate plans and design everything, but the actual execution of the plan may be left in the hands of the paid managers. Thus the shareholders bear the risk, organising is done by the entrepreneur and the management is carried on by the salaried employees.

The development of insurance business, too, has taken off the hands of the entrepreneur several of his worries and risks. If the treasurer absconds with money, if the factory catches fire, and the materials ordered from abroad sink in mid-ocean, the insurance companies are there to make good the loss.

Again, the entrepreneur can, by means of ' hedging ', cover his losses from unexpected changes in the price of raw materials.

Further, he is not the only sufferer if business goes wrong. The huge labour force employed in a big concern also share in the fortunes of the business and bear the risk.

Thus it is pointed out that the entrepreneur has shifted the financial risk to the shareholders and several other risks to the insurance companies and speculators. The work of management is done by the salaried employees. What, then, is left for the entrepreneur?

No doubt the entrepreneur has been relieved of several duties and worries, but the delegation of functions is not so complete as it may seem. He generally puts in some capital himself. Therefore there is not much of a breach in our golden rule " Control goes with risk."

Again, the risks which the insurance companies cover are not really business risks, and it was unfair to burden the entrepreneur with extraneous risks. Pure business risk still remains on him. Similarly, speculation does not relieve him of all risks.

The labourers, no doubt, suffer when the business fails. But their position has been compared with the passengers of a ship who can shift for themselves when the ship is sinking. But the entrepreneur is the captain, who is the last man to leave, if he can leave at all.

Our conclusion, then, is that there is some delegation, but not complete. There *is divorce between ownership and control of business*, the shareholders being the owners and the control being vested in the directors. The old type of capitalist employer has almost disappeared from businesses which count in these days.

In India, however, this divorce between ownership and control has not been effected to any considerable extent. The managing agents are the entrepreneurs. They do the initiating, planning, designing, and directing. They also supply the bulk of the finance. If they supply finance, they also retain the control in their own hands. The ownership and control in Indian companies thus largely go together.

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[1] For fuller discussion, *see* Robertson—*Control of Industry*.

3. The Scale of Production. There are several problems which the entrepreneur has to tackle in production. One such problem relates to the scale of production. The entrepreneur has to evolve a suitable size of the business. He will find that the larger the size, the more economical will it be.

There are several economies associated with large-scale production of which the following may be mentioned :

(1) There is much greater scope for specialisation both of labour and machinery. Every one can be put on the job to which he can do the fullest justice, and for every job the best men can be appointed. Thus all the advantages of division of labour are available.

(2) It is well known that a big, well-established concern can set up specialised machinery. A small cotton mill cannot have its own finishing or calendering plant. Use of specialised machinery is more economical.

(3) A big concern can install the most modern machinery. They can have their own repairing department so that it need not depend on unreliable *mistries*.

(4) There are, then, the commerical advantages of buying and selling. Several producers compete to secure the custom of a big concern. On the other hand, a big concern commands a wide market, for the customers can be assured of prompt and regular supply. It is more economical to execute large orders. Services of expert buyers and expert salesmen are at their disposal. Their purchases and sales are effected at the most favourable turn of the market.

(5) Its vast resources enable it to stand adverse times better, when a small concern may collapse under the strain. Only a big concern can be expected to survive a surious and prolonged depression.

(6) It can afford to spend large amounts on research and experiments, which, in the long run, more than repay their costs. A small concern has no money to sink in such experiments.

(7) It can spend more money on advertisement and salesmanship, and capture more markets. Money so spent brings rich reward. Sales increase.

(8) To a big concern overhead charges or supplementary costs come to much less per unit. These are administrative costs or the costs of management, including the salaries of managerial and clerical establishment, rent, cost of publicity and of travelling salesmen. Total cost is spread over a large output. Production is, therefore, economical.

(9) Besides, it can turn waste products or bye-products to good account. A big sugar factory may not throw away the molasses but use it for the manufacture of spirit. The use of bye-products lowers the cost of production of the main product.

What is the optimum output ? No doubt large-scale production is more economical. But it does not mean that production can be increased indefinitely. The most economical size is known as the optimum output. In Benham's words, "every firm will tend to produce that *output for which marginal cost equals price.* When a manufacturer increases the scale of production he has to incur additional cost (called the marginal cost). But he also gets additional income (called marginal revenue). So long as the additional income (*i.e.*, marginal revenue) is greater than the additional cost (*i.e.*, marginal cost), it will be to his advantage to increase the scale of production further. But every increase will mean that he will have to pay higher prices for the factors of production. His cost will therefore go on increasing. On the other hand, increased production will result in larger sales which will mean lower price. Lower price will reduce additional income (marginal revenue). Hence with the increase in the scale of production, marginal cost goes up and marginal revenue or price goes down; the gap between the two is progressively narrowing. But even a small gap indicates the possibility of increasing the profit by increasing the scale of production. When the gap has been closed altogether, there is no further possibility of adding to the profit of the firm. The profit has, in other words reached the maximum. This scale of production, then, represents the optimum output. At this stage, marginal cost equals price (*i.e.*, marginal revenue). He will go on producing more, so long as the price exceeds marginal cost. He will stop when marginal cost has overtaken price or marginal revenue and the two have been equalised. Differences in efficiency between firms will show themselves not in differences in marginal costs but in differences in output. The more efficient will have the larger output."

4. **Concept of Indivisibility.** A very important source of economy in a big concern arises from the use of an indivisible factor of production. This *concept of indivisibility* requires careful understanding. Just think of a hostel kitchen. It must have a minimum equipment of utensils and servants, *e.g.*, it must have one cook and one boy servant. This is the indivisible factor. Now if this equipment can satisfactorily serve fifteen students, it will be obviously uneconomical to have only ten students to serve. Charges per head will be higher and the cook and the servant will remain idle for some time. A larger group of students will keep them fully employed and get the utmost out of them. Similarly, a professor is indivisible. Suppose he can effectively impart instruction to a class of fifty students. In a small college, where the number in the class may be smaller, the authorities will not be making full use of him. The same is the case with a factory. Take the case of a sugar factory. It must have a minimum equipment of building, plant, clerical staff and other miscellaneous establishment. In case the factory is working below capacity, this equipment will not be fully used, a part of its will be wasted. Hence the scale of production must be such as to use the indivisible equipment fully, otherwise it will be uneconomical.

Several of our industries during the early 'thirties, notably the cement and the jute industries, were working below capacity, which was obviously wasteful. The indivisible equipment was not being fully employed. The point, therefore, is that when production is carried on a large scale, equipment will not remain idle, and the indivisible factors will be fully employed. It will mean more economical production.

Stigler has mentioned several types of indivisibilities.[1] (1) *Indivisibility of machinery.* (2) *Marketing indivisibilities.* These relate to the employment of salesmen, maintenance of purchasing department and advertisement. The larger the scale the smaller will be the cost per unit. (3) *Financial indivisibilities.* These relate to the managing costs of loans. Securities issued in large quantities can be listed on the stock exchange. (4) *Research indivisibilities.* Once certain costs have been incurred in inventions, the larger the scale, the more economical it is.

5. Internal and External Economics. Economics of large scale production can be grouped under two headings: internal economies and external economies.

Internal economies[2] are internal to a business. They are business secrets of a firm. They are the outcome of a particular manager's brain, and he keeps them well guarded and close. Every manager has his own method of using labour and machinery and of arranging finance, marketing, etc. All these are known as *Internal economies.*

It should be carefully noted that the internal economies are simply due to the increase in the scale of production. They arise from the use of methods which small firms do not find it worth while to employ.

Internal economies may be of the following types:

(*a*) *Technical Economies.* They arise from the fact that it is easy to make a large machine, and there is a mechnical advantage in the use of a large machine. Economies also arise from linking of the processes (vertical combination) and from specialisation.

(*b*) *Managerial Economies.* These economies arise from the creation of specialised departments or from functional specialisation. They also result from the delegation of routine and detailed matters to subordinates.

(*c*) *Commercial Economies.* They arise from the purchase of materials and sale of goods. Large businesses have bargaining advantages and are accorded a preferential treatment by the firms they deal with.

(*d*) *Financial Economies.* These economies arise from the fact that a big firm has better credit and can borrow at more favourable rates. Its shares enjoy a wider market which encourages a prospective investor.

(*e*) *Risk-bearing Economies.* A big firm can spread risks and can often eliminate them. This it does by diversifying output. Diversification imparts it strength and stability and makes it less vulnerable to changes in commerical fortune. There is also diversification of markets, of sources of supply, and of processes of manufacture.

External Economies, on the other hand, are not a peculiar property of any particular business. They are known to all and shared by all. These economies are generally available to a localised industry, where certain developments confer common advantages on all firms, such as advantages of specialised transport, trained labour, credit facilities etc.

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[1] Stigler, G. J.—*Theory of Price* (1947), pp. 135-37.

[2] For a detailed study *see* Cairncross, 1944, pp. 64-80,

External economies can be classified as under ;

(a) *Economies of Concentration.* These economies relate to advantages arising from the availability of skilled workers, the provision of better transport and credit facilities, stimulation of improvements, benefits from subsidiary industries, and so on. Scattered firms cannot enjoy such economies.

(b) *Economies of Information.* These economies refer to the benefits which all arms engaged in an industry derive from the publication of trade and technical journals and from central research institutions.

(c) *Economies of disintegration.* When an industry grows, it becomes possible to split up some of the processes which are taken over by specialist firms. For example, a number of cotton mills located in a particular locality may have the benefit of a calendering plant.

No hard and fast line can be drawn between internal and external economies. When a number of firms combine, external economics become internal economies. Whether particular economies are internal or external simply depends upon what operations it is profitable to combine.

It may also be noted that the expansion of an industry may result in some *diseconomies* also, because inferior or less efficient factors will be brought under employment.

It is worth nothing that as commercial and technical education spreads, and other such developments take place, the field of internal economies is being narrowed and that of external economies is being widened. This is the result of progress in different fields.

6. Limits to the expansion of a business. Although it is profitable to expand business, yet it is not always possible to do so. The main obstacles in the growth of business are : (a) Financial, (b) Managerial, and (c) Market obstacles. We take financial obstacles first. For expanding a business, the entrepreneur needs fresh supplies of capital. It may not, however, be easy to arrange for more capital. Still the difficulty is not insurmountable. A successful business man, who has got reputation for honesty and efficiency, will find capital forthcoming. Finance, it is said, is a mere camp follower.

But there are other difficulties. As business is expanded, prices of the factors of production will rise ; more may have to be paid in the form of rent, wages and interest to attract additional supplies of the factors. The costs will, therefore, rise. On the other hand, the additional output may depress the price in the market. Thus the costs will sooner or later overtake the income. He will go on expanding till the marginal revenue (additional income from the additional output) exceeds the marginal costs (additional costs incurred for producing the additional output). *The limit of expansion will be reached when the marginal revenue is equal to marginal cost.* A firm having marginal revenue equal to marginal cost, is called the *optimum firm*.

The highest hurdle is the managerial. An entrepreneur, however capable, cannot satisfactorily tackle problems exceeding a certain range and complexity. That is why the business cannot be expanded indefinitely. A point will be reached when the entrepreneur will find that his business has become unmanageable. Supervision will then become ineffective. Safeguards against fraud will add to the cost. Internal economies will gradually disappear.

These are some of the factors which govern the expansion of a business and limit its growth.

7. Advantages of Small-scale Production. We have studied the advantages of large-scale production. But small-scale production has economies of its own : (1) In favour of small-scale production it may be pointed out that the small manufacturer possesses greater degree of manoeuvrability. He is capable of prompt decision and quick execution. He can adopt new strategy as the market warfare indicates. There is no divided responsibility. He is the only person concerned.

(2) His initiative and responsibility have not been sapped by routine. He does not need elaborate system of book-keeping and checks to prevent fraud or eliminate waste of labour or material. As Marshall says, " the master's eye is everywhere ". Close supervision makes for economical working.

(3) Personal contact with the employees, and a kind word thrown now and then, will rule out the possibility of a strike or any other trouble. Peace generally reigns in a small concern.

(4) Personal contact with the customers, again, sends them away well satisfied and is productive of good results. Custom is stable and demand is steady.

(5) His advantage is the greatest if the demand is limited and fluctuating. A large-scale business is not suited to cater for such a demand.

(6) He is usually the sole proprietor. Enlightened self-interest acts as a strong spur to his activity. He works long and late. Hard work is bound to make a success of business.

With the wide dissemination of technical knowledge the number of external economies is increasing while that of internal economies is decreasing. This helps the small producer. Also, where business cannot be reduced to a routine, a small producer has an advantage over a big producer.

Why a small business is able to hold its own. The advantages enjoyed by small-scale business enables it to complete successfully against big businesses. There are, besides, other circumstances which help a small business and in which large-scale production is not economical. When the demand for a commodity is small and fitful, expansion of business is inadvisable. There are several factors which explain why market for certain goods is limited. There is, in the first place, *geographical limitation*. The demand may be strictly local. Small firms can meet local needs more economically. If the raw materials are bulky and scattered, production will have to be decentralised and carried on in small units where they can draw on the local supplies. Similarly, in sparsely populated regions, it is more economical to carry on production in small and scattered units. Also, if markets and sources of supply overlap so that the producers and consumers are in close contact with one another, *e.g.*, milk supply, smaller firms are found to be more economical. Thus a small firm is sheltered by distance. Expansion of firms is checked by market resistance especially if transport costs are high.

Besides geographical factors, the market is limited by *psychological factors*. Consumers have their own preferences based on superiority, real or imaginary, of the goods they use. Thus it is not only the distance which breaks a market but also prejudices, tastes and habits of the customers. This gives each firm a protected clientele. To overcome this resistance very expensive publicity may be necessary.

The geographical obstacles can be overcome by setting up branches and the psychological obstacles by widening the range of production. But these devices are often neither feasible nor economical, because they 'bump up' against the managerial obstacle to expansion.

From the above discussion, it is clear why the unit in extractive industries like agriculture is comparatively smaller than that in the manufacturing industries, and so also in trades like repairing, dressmaking, jewellery-making, etc., where individual tastes count, and standardisation is not possible. Where considerations of quality are the most important and dictates of fashion are paramount, a small business can easily hold its own against a big firm. In industries, where advantage cannot be taken of the system of cost accounting, scientific management and up-to-date office equipment, a small business can easily compete with a big business. That is why farming is generally done on a small scale. Also when the articles are bulky like bricks, and cannot stand transport, the unit of business must be small.

Besides, a small producer in modern times has been helped to hold his own against a big producer by developments like electricity, co-operative movement, and dissemination of scientific and technical knowledge through technical journals. Such knowledge is no longer the monopoly of the big business.

The entrepreneur's own inclination, too, is responsible for the existence of small firms. "From a mixture of motives—from a love of independence and uncertainty, from pride or ambition, or the urge to create—men may prefer to run a small business of their own rather than act as subordinates at a higher rate of pay."

These are some of the reasons why a small-scale producer is able to hold his own against a big producer. That also explains why small-scale bussinesses exist side by side the large-scale businesses.

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CHAPTER XII

FACTORS IN CO-OPERATION

1. Combination of Factors. One of the problems to be tackled by the entrepreneur is how best to combine the factors of production in his business. A correct combination of the factors of production is the outcome of the application of the principle of substitution or equimarginal return in the sphere of production. Just as a consumer is able to maximise his satisfaction by acting in accordance with the law of substitution, similarly an entrepreneur or producer will be able to maximise his profit by acting on the same principle.

The community utilises all the factors of production through the entrepreneur. He tries to combine the factors of production most economically. The entrepreneur is frankly out for profit. Just as the consumer wants maximum satisfaction, the entrepreneur is anxious to maximise his profits. Just as the consumer gets the maximum satisfaction by so arranging his purchases that from each direction of his purchase the marginal utilities equalise, in the same manner, the entrepreneur is able to get the highest possible return from his investment, if he is able to equalise the marginal productivities of the factors he employs. If the marginal productivity of one factor, say machinery, is greater than that of another, say labour, he would substitute the former for the latter. The result would be that, on account of the operation of the law of diminishing returns, the marginal productivity of machinery will come down and that of labour will go up until the two are equalised. This will represent the most economical combination of the factors of production.

The entrepreneur will try various permutations and combinations of the factors in order to devise the most efficient as well as the cheapest combination. The guiding consideration will be the relative prices of the factors and their efficiency. Benham suggests the following formula.[1]

If $\frac{\text{the marginal product of factor A}}{\text{price of factor A}}$ is greater than $\frac{\text{the marginal product of factor B}}{\text{price of factor B}}$, it will be to the advantage of the entrepreneur to employ a method of production which uses more of A and less of B.

It is necessary to remember that most of the factors are so unlike one another that it is not generally feasible to replace one factor *completely* by another. What usually happens is that we use a little more of one factor and a little less of another, *i.e.*, substitution takes place at the margin only.

It should be carefully noted that the law of substitution does not lead us to the conclusion that the entrepreneur will produce that output which entails the minimum total cost. If a shoe factory produces 10 pair of shoes in a year, *its total cost* may perhaps be the least, but it does not pay the manufacturer to produce 10 pairs only. He is not concerned with the cost as such ; his sole concern is to maximise his profit. Similarly, we cannot infer from the working of this law that his output will be such that the *average cost* per unit is the least. The entrepreneur cares little for the average cost. It may be going up, he does not worry the least, provided the marginal revenue exceeds the marginal cost. Our conclusion is that the entrepreneur will go on expanding his output till marginal revenue and marginal costs are equalised. The law of substitution simply tells us that whatever output the entrepreneur has decided to produce, he will try to produce it in the cheapest possible manner. The most economical combination will be one in which the marginal productivies of the various factors used are equal.

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[1] Benham—*Economics* (1940), p. 193.

2. Allocation of the Factors. In the above section, we have studied the principle according to which various factors are combined in the most economical productive process. In this section, we shall see how each factor is best put to various uses. Factors of production are limited. It is, therefore, very necessary that they are so allocated among the various uses or industries that the community derives the greatest benefit out of them. It would, of couree, be ultimately determined by the consumers' preferences.

If a factor is free good, it will be combined with other factors in such a manner that its marginal productivity is zero. Since it costs nothing, it will be used so long as it can make even the smallest contribution, or till its extra product falls to zero.

In actual practice, however, the factors are not free. Since some price has to be paid for a factor, no factor will be used to such an extent as to reduce its marginal productivity to zero. Each scarce factor will be allocated among the various industries in such a manner as to equalise its marginal productivity in every industry where it is employed. If marginal productivity of labour say, in iron and steel industry, is greater than that in sugar industry, labour will be shifted from the latter to the former, till the marginal productivities in the two industries are equalised. In the same manner, if land devoted to sugar-cane cultivation yields more than that to growing cotton, it will obviously pay to withdraw some land from cotton growing and divert it to sugar-cane. This diversion will continue till the marginal productivities in the two alternative uses of land have been equalised.

Thus the factors of production will be ideally allocated among the various alternative uses when there is no inducement for diverting them from any one use to another. This will be the case only if the marginal return in each use is equal. So long as it is not equal, reshuffling will go on. *The best allocation of the factors of production is when the value of the marginal product of a factor is the same in everyline in which it is employed, or the equilibrium situation with regard to allocation of factors is that in which the community places the same value upon margirnal product of the factor in every industry.*[1]

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[1] *See* Benham—"Economics."

3. Laws of Returns. The combination of the factors of the production has an important bearing on the law to which an industry may be subject. There are three laws of returns known to economists, the laws of diminishing, increasing and constant returns. "There is *said* to be increasing, decreasing or constant returns according as the marginal returns rise, fall or remain unchanged" as the quantity of a factor of production is increased. In terms of cost, an industry is subject to increasing, decreasing or constant returns according as the marginal cost of production falls, rises or remains the same, respectively, with the expansion of the industry. Now a word about each of these laws.

4. Law of Diminishing Returns. The law of diminishing returns has a special application to agriculture. In the absence of the law of diminishing returns "the science of political economy," says Cairnes, "would be as completley revolutionised as if human nature itself were altered". Such is the importance of the law of diminishing returns in economic theory.

It is the practical experience of every farmer that "*successive applications of labour and capital to a given area of land must ultimately, other things remaining the same, yield a less than proportionate increase in produce*". If by doubling labour and capital he could double the yield of his land, and so on, it can be easily seen that one acre of land could be made to produce as much wheat as could suffice for the entire population of the world. That this cannot be done is simply due to the operation of the law of diminishing return. If investment is increased, the yield will no doubt increase, but at a diminishing rate. Marshall has thus stated the law : "*An increase in capital and labour applied in the cultivation of land causes in general less than proportionate increase in the amount of produce raised, unless it happens to coincide with an improvement in the arts of agriculture.*"

Limitations of the Law of Diminishing Returns. The law of diminishing returns does not apply always. There are several exceptions :

(*i*) *Improved methods of cultivation.* Man's ingenuity is ever striving to counteract the operation of this law by improving the technique of cultivation. Scientific rotation of crops, improved seeds, modern implements, artificial manures and better irrigational facilities, etc., are bound to give increasing return. But science cannot keep pace with the increasing demand for food. The niggardliness of nature must ultimately assert itself and the law must operate sooner or later.

(*ii*) *New Soil.* Again, when a virgin soil is brought under cultivation, the additional return for each successive dose of labour and capital may increase for a time . But after a point the tendency to diminishing returns will be visible. Hence in the case of a new soil, the law of diminishing returns does not apply in the beginning.

(*iii*) *Insufficient Capital.* If insufficient capital has been applied hitherto increased application will, at first, yield more than proportionate return. Later, the marginal return may decrease. The early stage is an exception to the law of diminishing return.

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1. **See Benham—*Economics*.**

Consider the following table :—

Yield in maunds of wheat, from a 50-Acre Farm

1 No. of Workers	2 Total Return	3 Marginal Return	4 Average Return
1	80	80	80
2	170	90	85
3	270	100	90
4	368	98	92
5	430	62	86
6	480	50	80
7	504	24	72
8	504	0	63
9	495	—9	55
10	440	—25	47

From this table it appears that there are three different aspects of the Law of Diminishing Returns.

(1) *Law of* **Total** *Diminishing Returns* (column No. 2). In this sense, the returns begin to diminish from the *9th* worker. Every successive worker employed does make some addition to the output. But the 8th adds nothing and the 9th and 10th are a positive nuisance. As men cannot be had gratis, no prudent farmer will employ more than seven workers in the conditions represented by this table.

(2) *Law of Diminishing* **Marginal** *Returns* (column 3). The marginal returns go on increasing up to the 3rd worker. This is so because the proportion of workers to land was at first insufficient and the land was not being thoroughly tilled. This phase of cultivation is unstable and will not be found in practice. When the farmer knows he can get more than proportionate return by employing an extra hand, he will certainly do so. The marginal, *i.e.*, the additional return goes on falling from the 3rd man onwards till it drops down to zero at the 8th. The 9th and 10th men are merely a cause of obstruction to the others, and are responsible in making the marginal return negative.

It should be remembered that the marginal return is not what can be attributed to the last man whose employment is considered just worthwhile, as all men are supposed to be alike. The marginal return is simply the *addition* that the marginal worker makes to the total return.

(3) *The Law of Diminishing* **Average** *Returns* (column 4). The average return reaches the maximum at the 4th worker, *i.e.*, one step

later than the marginal return reaches the maximum. Then the marginal return falls more sharply. The two will equalise somewhere between the 4th and 5th, *i.e.*, when the 5th works part-time. But we do not employ men in fractions in real life. Therefore, it is not always possible to equalise the marginal and the average returns. It is also clear that it is possible for the average output to increase while the marginal output falls.

The law can be diagrammatically represented as under[1] :—

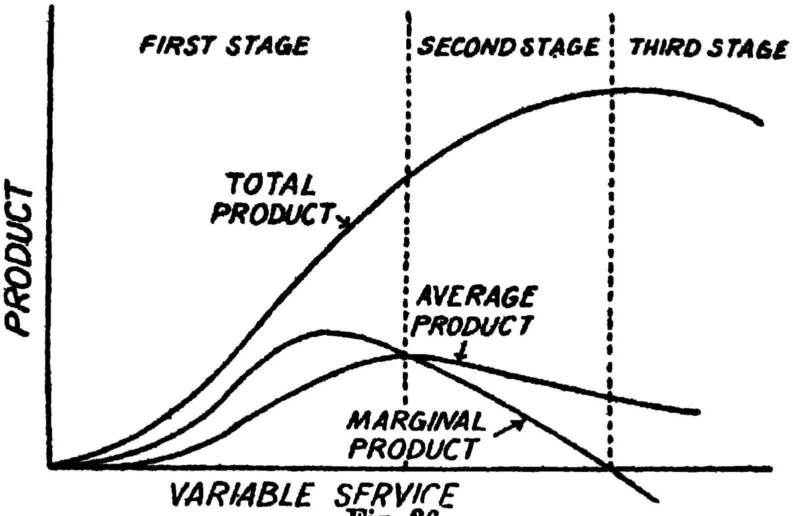

Fig. 26.

The total product (*i.e.*, return) goes on increasing till it reaches the maximum where the third stage starts. The marginal return reaches the maximum the earliest and starts diminishing the first (*i.e.*, in the first stage). The average return starts diminishing next, *i.e.*, where the second stage begins. This is in keeping with the table given on the preceding page. Obviously, no sensible entrepreneur will operate in the third stage where the marginal product is zero, unless, of course, the variable factor is free. Economically the second stage is the significant region where the average product is greater than the marginal product which is still positive.

The Law in the Intensive and Extensive Forms. So long as the value of the additional product exceeds the expenses of cultivation, the farmer goes on taking inferior and inferior lands. He will stop further extension where the additional income (marginal revenue) is equal to the additional expense (marginal cash). This land is just worthwhile to cultivate and is known as the *marginal land.* The law of diminishing return, in its extensive form, operates when cultivation is extended to inferior lands and the return goes on decreasing at every step.

But when the farmer goes on putting more and more doses of labour and capital in the same piece of land, each successive dose will yield less than proportionate return. This is the intensive form of the law of diminishing returns. He will stop further application of the doses where the extra expense is equal to the extra income obtained. The last dose, the application of which is considered just worthwhile, is called the *marginal dose.* In the extensive form, the proportion of land to labour and capital is increased and in the intensive form the proportion of labour and capital to land is increased.

It is well to emphasize that in this discussion it is assumed that *the return is measured in quantity and not in value.* It may be that the additional return has decreased but, price having risen, its value may be higher.

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[1] This diagram is taken from Stigler—*Theory of Price* (1947), p. 123.

How to counteract the law. Anything which improves the quality of the land and makes it yield more, or anything which *adds to the value of the yield* will check the operation of the law. Use of modern implements, judicious mixing of soils and manures, careful selection of the seed and proper sowing, deeper and deeper tillage, and the provision of ample irrigation facilities, etc. can enable us to counteract the working of the law. *Scientific cultivation, in short, can check the operation of the law of diminishing returns.*

Besides agriculture, the law also applies to extractive industries like mining, fisheries and also to building industry. The law operates when mining operations are extended to inferior, distant or deeper mines, when fishing operations are concentrated in one place and when more and more storeys are raised on a building.

Why the Law specially applies to Agriculture. The law of diminishing returns specially applies to agriculture and other extractive industries. One thing that is common in all these industries is the supremacy of nature. *It is, therefore often remarked that the part that nature plays in production corresponds to diminishing returns and the part which man plays conforms to the law of increasing returns.* The inference is that agriculture, where nature is supreme, is subject to diminishing returns, while industry, where man is supreme, is subject to increasing returns.

There are several reasons why agriculture is subject to the law of diminishing returns. The agricultural operations are spread out over a wide area, and supervision, cannot be very effective. Scope for specialisation for the use of machinery is also very limited. Therefore, economies of large-scale production cannot be reaped. There are further limitations arising from the seasonal nature of the industry. Agricultural operations are likely to be interrupted by rain and other climatic changes. Man is not a complete master of Nature, and no wonder that the law of diminishing returns operates in agriculture.

Similarly, it is understandable that manufacturing industries should be subject to the law of increasing returns. Here man's ingenuity has the fullest scope to show itself. By the introduction of division of labour and the use of the most modern appliances, production can be increased to unimaginable limits. Concentration of workers under one roof renders supervision easy and effective. Nature's malignant influences are held constantly at bay. Man is free to plan, undertake and execute. He can realise all the possible economies, internal and external.

But it is wrong to say that agriculture is *always* subject to diminishing returns and manufacturing industries *always* to increasing returns. The law of diminishing returns applies everywhere. To borrow Wicksteed's words, " This law is as universal as the law of life itself." Its application is not confined to agriculture only ; it applies to manufacturing industries too. If the industry is expanded too much and becomes unwieldy, supervision will become lax and the costs will go up. The law of diminishing returns will, therefore, set in.

The only difference is that in agriculture it sets in earlier and in industry much later. A prudent industrialist may not allow that stage to come at all. Agriculture, too, in the beginning has increasing returns. Hence both laws apply in all types of industries, extractive as well as manufacturing. As a matter of fact they are two aspects of the same law, which is also known as the Law of Proportionality.

5. Law of Diminishing Returns in a general form. The discussion of the law of diminishing returns in relation to land, since the times of the English Classical economists, has obscured its real significance. There is nothing peculiar about agriculture for the law to be exclusively associated with it. As a matter of fact the law has been held at naught by scientific agriculture in progressive countries. This is evident from the fact that whereas consumption of food has increased on account of higher standards of living, the number engaged in the production of food has actually gone down.

The fact is that the law does not apply to agriculture *alone.* It has got a general application and can, therefore, be put in a general form. The law of diminishing returns simply refers to a principle of combination of factors. In a general way, it can be stated that if a variable factor is combined with some constant factors, the average and the marginal return for that variable factor will diminish. Benham states the law thus : " *As the proportion of one factor in a combination of factors is increased* **after a point** *the average and marginal product of that factor will diminish.*" This is due to the fact that the combination does not represent a correct proportion of the factors. There is too much of one factor in relation to others. When proper balance is restored, the law of diminishing returns will no longer operate.

The operation of the law is due to the scarcity of the factors of production. In the words of Chapman, "*The expansion of an industry, provided that additional supplies of some agent in production which is essential cannot be obtained, is invariably accompanied at once or eventually by decreasing returns, other things being equal.*"

A little reflection will show that the law of diminishing returns operates because the factors of production are imperfect substitutes for one another. As Mrs. Robinson says, " What the Law of Diminishing Returns really states is that there is a limit to the extent to which one factor of production can be substituted for another, or, in other words, that the elasticity of substitution between factors is not infinite. If this were not true it would be possible, when one factor of production is fixed in amount and the rest are in perfectly elastic supply, to produce part of the output with the aid of the fixed factor, and then, when optimum proportion between this factor and other factors was attained to substitute some other factor for it and to increase output at constant cost. Thus the Law of Diminishing Returns entails that the various elements required for the production of any commodity should be divided into groups, each group being a factor of production, in such a way that the elasticity of substitution between one factor and another is less than infinite."[1]

The Law of Diminishing Returns means the law of increasing cost. Conceived thus, it states that increased application of some factors of production, while others are constant, will lead to output being obtained at increased cost per unit. You can say that either the return goes on decreasing or the costs go on increasing. It is the same thing.

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[1] **Robinson, Joan—*The Economics of Imperfect Competition* (1945), p. 330.**

It may be noted that the law of diminishing returns represents the most efficient combination of the factors of production. It is a combination that will give the higher return. We can get increasing return per man by giving him too many acres of land, *i.e.*, by wasting land. Similarly increasing return per acre can be obtained by wasting men or labour. But this is not economics. Thus any attempt to obtain increasing return will mean some waste of resources and a departure from the most economical combination of factors. In a right combination every factor will be combined with other factors in such a proportion that if it alone were increased, its average product will diminish. Hence the point where diminishing returns would set in represents the most efficient combination.

6. The Importance of Law of Diminishing Returns in Economic Theory. The Law of Diminishing Returns has formed the basis of a number of economic doctrines propounded by the English classical economists, especailly Malthus and Ricardo. It was represented as an inexorable law of nature. It accounted for a lot of pessimistic thinking in Economics and earned for it the title of a ' dismal science '. The Malthusian theory of population, which says that population increases faster than the food supply, is obviously based on the fact that the production of food is subject to the law of diminishing returns.

The Ricardian theory of rent explains the determination of rent on the assumption that inferior lands have to be cultivated on account of the operation of the law of diminishing returns. The margin of cultivation descends, and rent rises. The optimum size of business is explained again by the working of this law. The marginal utility theory of value, and the marginal productivity theory, which determines the share of a factor of production in the national dividend, are based on the operation of this important law. The law of diminishing returns, therefore, occupies a very important place in the realm of economic thought.

7. Law of Increasing Returns. An industry is subject to the law of increasing returns if extra investment in the industry is followed by more than proportionate returns, *i.e.*, if the marginal product increases. In terms of cost, the law of increasing returns means the lowering of the marginal costs as industry is expanded. As marginal costs indicate price, we can say that the law of increasing returns operates in an industry, if with every expansion of its output, the price of the product falls

We have already seen what economies can be reaped if the scale of production is increased. Advantages of specialisation of labour and machinery and other commercial and miscellaneous economies make it possible to lower the cost of production, and we have increasing returns. Among the economies of mass production which contribute to greater productivity at less cost may be mentioned[1] :— (*i*) Use of non-human and non-animal power resources (water and wind power, steam electricity, internal atomic energy); (*ii*) automatic self-adjusting mechanism; (*iii*) use of standardised, interchangeable parts; (*iv*) breakdown of complex processes into simple repetitive operations; (*v*) specialisation of functions and division of labour; and (*vi*) many other technological factors.

The law of diminishing returns operates when there is dearth of an essential factor. But if there is no dearth, the law of increasing returns will operate. "The expansion of an industry, provided that there is no dearth of suitable agents of production, tends to be accompanied, other things being equal, by increasing returns."[2]

The law of diminishing returns operates when the factors have been combined in wrong proportions. Now when we try to correct the combination, increasing returns will follow till the balance is completely restored.

The concept of indivisibility, too, has a close bearing on the law of increasing returns. A manufacturer sets up a plant to cope with a peak demand, but in actual practice it may be producing below capacity. In that case, if an addition is made to some other factor or factors, the indivisible factor will be more fully employed, and increasing returns will follow.

These two laws of increasing and diminishing returns can also be explained in terms of the optimum business unit. We shall have increasing returns when we are moving towards the optimum, and diminishing returns when we move beyond the optimum.

8. Law of Constant Returns. An industry is subject to the law of constant returns when, whatever the output or scale of production, *the cost per unit remains unaltered, or increased investment of labour and capital results in a proportionate increase in the output.*

Marshall has pointed out that the part played by nature corresponds to diminishing returns and that played by man to increasing returns. That is why in agriculture, where nature is said to be supreme, there is diminishing return. In manufacturing industries, where man's ingenuity has the fullest play in effecting all sorts of economies unhampered by external forces, there operates the law of increasing returns. It is conceivable that some industry may be midway between the two, where neither there is diminishing return nor increasing return, but there is constant return.

Think of an industry where the raw materials, representing nature's part, account for the same proportion of the total cost as the manufacturing cost which is man's part. In every industry the two opposite tendencies are at work. When it is expanded some costs rise and the others fall. It is possible that there may be an industry where these two tendencies just neutralise each other, and we have constant return. The example of an industry making blankets out of pure natural wool is sometimes given in this connection. It is said that the raw material (wool) is subject to diminishing returns, but this tendency is just counter-balanced by the economies in the manufacturing costs, and there is a constant return.

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[1] Samuelson, P.A. —*Economics* (1948), p. 21.

[2] Chapman, *op. cit.*, p. 102.

The concept of the optimum can help us to understand the operation of the law of constant return. We have said that movement towards the optimum means increasing returns, and the movement beyond it the diminishing returns. But if we keep to the optimum, for however short a period it may be, we shall have constant returns.

9. **Rationalization.** So far we have been studying the combination of factors from the point of view of individual firm. Now let us look at the industry as a whole. When an industry is organised in the best possible manner, it is said to be rationalised.

After the Great War of 1914-18, Germany, stripped of a part of its valuable territory and faced with heavy reparation demands, was forced to reconstruct it industry. This process of reconstruction has been called *Rationalization*. The movement soon spread to other countries and came to be called *New Industrial Revolution*.

In the words of Balfour, " If (rationalization) really is the method of technique and organisation designed to secure the minimum waste in effort and material, added to that, the scientific organisation of labour, the standardisation of materials and products and the simplification of processes and physical improvements in the system of transport and marketing."

Under competitive capitalism, equilibrium is established by the free working of natural economic forces, but this natural adjustment entails suffering and sacrifice. The advocates of rationalization say that this suffering is avoidable.. They point out that the industry as a whole can be so scientifically organised and systematically managed that such crises can be avoided altogether, or their severity mitigated when they actually occur.

The main planks in the rationalization programme are *modernisation, scientific management and amalgamation.* Every producing unit in the industry must have a most *modern and complete equipment* of plant, machinery and other assessories, so that every part of the equipment is nothing less than the very best. All worn-out and obsolete machinery is to be ruthlessly scrapped. Production is concentrated in the most modern works.

But mere modernisation is not enough. It must be accompanied by *scientific management.* The idea of scientific management originated with Taylor in America. It involves *Time Study, Motion Study* and *Fatigue Study.* The personnel of the factory are to be trained and instructed in using the best possible method of doing the job in the minimum time.

Maximum efficiency of each individual unit in the industry, however, does not solve the problem of the industry as a whole. It may rather create the problem of over-production when each unit is turned to the highest pitch. *The basic idea of rationalization is not merely the efficiency of the units but the health and efficiency of the entire industry.* This necessitates a collective action of the part of all engaged in the industry. Most of the ills of industries can be attributed to the existence of isolated, independent and uncoordinated units. Close co-ordination of the producing units seems to be absolutely essential. Without *centralised control*, the complicated and difficult problems of modern industry, especially regarding efficient marketing, cannot be successfully tackled. With this end in view, amalgamations are advocated and fostered. The inefficient units are to be closed down and the efficient ones knit together so that the industry becomes an integrated whole. *Production is concentrated in the units which have the lowest cost of production.* Special attention is to be paid to scientific marketing while assigning quota of output so that cross haulage is avoided, and the nearest markets are served by the nearest units.

Rationalization is beneficial in several ways :—

(1) *Economies of scale.* In a rationalised industry, the producing units are large and all the economies of large-scale production are available. There is economy of buying and selling, economy of space, economy of tools, economy of specialised labour and that of specialised machinery. More money can be spent on research and experiments.

(2) *Improvement in the standard of living.* Mass and standardised production lowers cost and bring products within the reach of the poor members of the community. The standard of living consequently rises.

(3) *Increase in competitive strength.* A rationalised industry is strongly entrenched against onslaughts of foreign competition. It can considerably cut down the costs and successfully compete in the world markets.

(4) *Stability.* The industry is able to face bad times with greater confidence because of its large financial resources and large volume of trade. Periodical jolts and jerks can be avoided. The depression can be anticipated and suitable measures adopted in advance. Much suffering is thus avoided.

But rationalisation is not an unmixed blessing. It creates several problems and difficulties also, *viz.*—

(1) *Financial Difficulties.* Rationalisation needs heavy expenditure. The capital structure of the industry becomes costly and may handicap the industry in meeting competition from industries having more economical capital set-up. There is danger of over-capitalisation.

(2) *Displacement of Labour.* Rationalisation involves a high degree of mechanisation. The immediate effect of the introduction of machinery is the displacement of labour. If human beings suffer, rationalisation cannot be commended. In the long run, however, more employment is created.

(3) *Abuses of Monopoly.* Powerful combines, which are the outcome of the rationalisation movement, exploit the consumers. They may charge high prices, although they are in a position to reduce them. There are a number of other abuses associated with a monopoly.

(4) *Less Scope for New Business Talent.* Big combines throttle

the rise of new enterprises. The promising rivals are ruthlessly crushed. It is a national loss.

In spite of these shortcomings, there is much that can be said for rationalisation. Competitive capitalism is almost dead. It is a pity that Indian industrialists are still living in the 19th century. Our jute mill industry, sugar industry, cotton mill industry and several others have been suffering from lack of co-operative action, but they have not given up the path of isolated individualism. They prefer sinking alone to swimming together. The truth of the simple proverb ' unity is strength ' has not yet gone home. Cement industry in India is the only one which by cartelising itself chose the path of sanity adn wisdom. Let us hope that our industries will rationalise themselves to meet the post-war industrial struggle.

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CHAPTER XIII

MOBILITY OF THE FACTORS OF PRODUCTION[1]

1. **Types of Mobility.** Any change in consumers' scale of preferences must produce corresponding changes in the direction of productive activity. Mobility of the factors of production is a great help in this connection. By mobility we do not mean merely physical or *geographical mobility, i.e.*, the bodily transfer of a factor of production from one place to another. But *mobility also implies an alternative use of a factor either in the same place or in another place.* In this sense, mobility means *mobility between occupations, mobility between places, and mobility between industries.* A farm may be devoted to the cultivation of cotton instead of sugar-cane ; it is a change of industry but no change of place. A manager of a cotton mill at Ahmedabad becomes a manager in a mill in Bombay ; it is a change of place but not of occupation. A professor of Economics in Bombay takes up the job of an Economic Adviser to a bank in Delhi ; it involves a change of place and also a change of occupation. A clerk gives up his job in a sugar factory and becomes a clerk in a cotton mill ; he has only changed the industry. Thus mobility of one type does not necessarily involve mobility of another type.

We shall consider the extent of mobility in the case of each agent of production.

2. **Mobility of Land.** In Economies, 'land' stands for natural resources like mountains, seas, rivers, climate, soil, air, sunshine, etc. It is possible to divert the course of rivers, by building dams and diverting the water into canals. But we must admit our inability to move mountains from their places, to change a tropical climate into a temperate one, to carry our land to a region where rainfall is abundant or bodily transfer our college building and hostel to a better locality. 'Land' baffles our effort at mobility since *georgaphical mobility of land is out of the question.*

But this is not the only type of mobility with which we are familiar. Mobility, in the sense that we have defined it, means the possibility of a factor being put to alternative uses. Is land absolutely specific ? No. Although land does possess some degree of specificity, yet within certain limits it can be made to grow quite a large variety of corps. A man may not be able bodily to transfer his land from one city to another, yet by selling it in one place and buying it at another, he can give it mobility. There is another way. A man, having land in different places, may divert labour and capital to one place and improve land there and neglect it at another place. Thus one land becomes more productive and the other loses in productivity, and it is productivity in which we are really interested. In this way land can be imparted mobility.

But a greater mobility is given to land when the products of land are transported. It practically transfers the service of land from one place to another, and we value a factor not for its own sake, but for the service it renders. Thus land is not so immobile as is generally supposed. It can be put to several alternative uses. Wheat-growing land can be changed into pasture land, and *vice versa*. If nothing else can be done, its product can be transported. This degree of mobility is sufficient for the community to produce the assortment of things it most prefers.

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[1] For a detailed study *see Benham—Economics.*

If the Government imposes restrictions on the transfer of land by heavy registration fee on transfers, it will tend to reduce its mobility. The Punjab Land Alienation Act of 1901 had somewhat a restrictive effect. Under this Act, agricultural land was not allowed to be put to non-agricultural uses.

3. **Mobility of Labour**. The human baggage is said to be the least portable. Let us consider to what extent mobility, in all its forms, exists among workers. It may be repeated here that there are three types of mobility, *viz.*, mobility between industries, between places, and between occupations.

Mobility between industries. Mobility between different industries presents no difficulty. An accountant, a typist or a chowkidar in one industry can easily occupy a similar position in some other industry.

Mobility between places. As far as mobility of labour from one place to another, called *geographical mobility*, is concerned, there are found fairly formidable barriers. There is the dread of the change, very vague but nevertheless real. No person likes to be uprooted from familiar environments and transplanted in a strange soil. Few people have the heart to begin life afresh in a new place. It is so especially with people who are advanced in years. The youthful workers are enterprising and they can be easily persuaded to move out.

Differences of language, habits, customs and modes of life are other deterrent factors for labour to move either from one part of the country to another, or from one country to another. Mobility between countries is further hindered by immigration laws. System of poor relief, unemployment benefits and other State assistance, render labour all the more immobile.

In India, overcrowded cities, congested industrial areas, lack of housing facilities, insanitary surroundings, high cost of living, an ever-recurring cycle of epidemics, are quite enough to frighten away labourers. That is why the Royal Commission on Indian Labour remarked that "labour is pushed, and not pulled," into industrial centres. Such conditions stand in the way of the mobility of labour. The development in the means of communication and transportation has, however, facilitated geographical mobility considerably.

Mobility between occupations. Mobility between occupations is the most difficult one. It is of two types : (*a*) *Horizontal Mobility*, *i.e.*, mobility between two occupations on the same level, *e.g.*, a professor of History becomes a professor of Economics, or a blacksmith takes up the job of a carpenter. Such mobility is not difficult.

(*b*) *Vertical Mobility* is the mobility to a higher level, *e.g.*, a clerk becomes a teacher, or a *mistri* becomes an engineer. This mobility is very difficult. Apart from natural aptitude, different occupations require different skill and knowledge, and it is not so easy for one to fit oneself into another occupation, especially one requiring superior knowledge.

To tell a poor man that doors of all occupations are open to him is a cruel joke. Examinations, licensing system and high premia for apprenticeship (*e.g.*, in the case of chartered and incorporated accountants), apart from restrictions imposed by industries themselves, are effective barriers which not many can cross. Some jobs, like the high civilian posts or posts in diplomatic service, require high social status and influence of parents. This last factor is the most potent one in keeping a young man of a poor family off. There is thus very little mobility between one grade and another. It is not surprising that the most respectable jobs happen also to be the most remunerative ones, while those in the lower social scales are also in the lower economic scale.

But some degree of mobility is essential for making economic adjustment. If the economic system is not to suffer from jolts and jerks and of human suffering is to be avoided, labour must be made sufficiently mobile. Mobility of labour is conducive to the flexibility of the economic system. In this way mobility is highly beneficial. Mobility within a group, and among unskilled labourers, is fairly sufficient for the purpose of making economic adjustments. There is a wide range of jobs that a man, having reasonable physical strength and endowed with a fair amount of intelligence, can successfully take up. Further, wholesale movement of labour is not needed in order to meet a new situation.

Again, what is wanted is not direct substitution but merely indirect reshuffling. If cotton industry is contracting and the sugar industry is expanding it is not necessary that there should be a direct transfer of personnel from the former to the latter. What will actually happen will be the shifting into allied occupations. Some workers from cotton industry may move into jute industry and some of the latter may move into paper mills and workers from jute or paper industry may infiltrate into sugar industry.

A stationary or declining population is a handicap in the way of mobility, whereas a growing population like that of India is a great help. The new generation can enter into new occupations, and avoid those which are becoming unremunerative.

Our conclusion is that although there are very serious handicaps in the mobility of labour, yet for adjusting economic factors to the new requirements of industry it is sufficient, unless the changes are very rapid and fundamental which is seldom the case.

4. Mobility of Capital. Capital takes several forms. Working capital is fairly mobile. Tools and implements and simple machines can be used by every industry and can be transferred to any place with ease and without much cost. This part of the nation's capital is also fairly mobile.

But the most important and the most expensive part of the community's capital consists of the fixed capital goods, *i.e.*, buildings of factories machinery, permanent equipment of railways like rail tracks, station buildings, canals, tube-wells, etc. In such cases mobility is lacking. All such capital is permanently fixed and cannot be easily moved to other places. The Second World War offers an illustration of the mobility of capital. When the deluge of Nazi hordes was hardly a dozen miles from Moscow, the Russians had to dismantle their plant and machinery and transport them to behind the Ural Mountains. But here cost was no consideration. Such a thing will never be done in normal times.

Further, much capital is usually also sunk or specialised. You cannot turn a cotton mill into an ice factory, or a jute mill into a sugar factory. Not only, therefore, the fixed capital must remain where it is, but it must also continue to be used for the purpose for which it was originally installed. Such capital is obviously immobile geographically.

But by mobility we do not merely mean geographical mobility ; it also means the possibility of being put to alternative uses. In this latter sense, even capital possesses a fair degree of mobility. Transport services can be made to carry anything. Plant can be made to produce, with very slight modifications, entirely different products. It is said that the machinery used for making watches can be made to produce sewing machines. A plant meant for motor-car production can be used to produce aeroplanes or armaments. Even within its own line a wide range of articles can be produced in the same factory with the same plant.

Besides, flexibility to the capital structure can be imparted in another way. There are new savings like the new generation of labour. These savings can be diverted to those uses which have become more profitable. Every manufacturer sets aside certain amount out of the annual profits towards the depreciation fund. The fund is utilised for repairs, renewals and replacements of the plant when it has become worn-out or obsolete. But it will be very rare that the plant is replaced by another plant quite identical with the old one. Capital is thus being used up and replaced, or not replaced, as the new economic situation demands. It is not prefectly mobile, but the degree of mobility is sufficient to make the economic system adaptable.

5. Is Modern Economic System Adaptable? Having examined the extent to which several agents of production are mobile, we are now in a position to see whether the modern economic system, as a whole, is rigid or flexible. Does it admit of modifications to meet the changing needs of the community ?

We have seen that the free mobility of the factors of production is hindered in practice. Physical mobility of land is impossible. Huge investments of capital are sometimes needed for clearing, draining and improving land to make it arable. We are at the mercy of the weather, climate and rain. These are some of the impediments in the way of mobility of land.

Labour is also not freely mobile. Few are willing to leave their homes and hearths for a petty gain. People are reluctant to move to new places on account of difficulty of language and the difference of customs. Differences in skill required for different occupations, high cost of training in some professions, long periods of apprenticeship in others, social disabilities and State regulations, etc., make free entry into an occupation a myth.

Capital too is tied down to its roots. To dismantle it and transport it is a costly affair. It becomes so specialised as not be available for any other use.

These are real difficulties. But even then the structure of productive economy is fairly elastic. Land can grow a fairly wide range of crops, and it can be put to several alternative uses. Mobility of labour between industries is easy and that between places is being facilitated by cheap and efficient means of communication and transport. Mobility between different occupations is being assisted by wide diffusion of educational facilities and technical training. The advent of the new generation makes up for the lack of mobility on the part of the older generation. Physical mobility of capital may not be possible, yet a given plant can be made to produce a number of alternative products, so that variations in the composition of the final products or consumers' goods can be made without much difficulty. The factors of production, therefore, present little difficulty when an entrepreneur decides to make changes in production.

The phenomenal development in the means of communication and transport has annihilated space and time. Scientific progress and improvement in technical knowledge have opened up unheard of possibilities for the entrepreneur. Several new industries have been developed and old ones allowed to decay. We can, therefore, safely conclude that the modern economic system is fairly adaptable. World War II has demonstrated to what extent and with what rapidity national resources can be diverted and put to uses which the community decides to be the most urgent.

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CHAPTER XIV

FORMS OF BUSINESS ORGANIZATION

1. **The Individual Entrepreneur.** Entrepreneurial work can be organised in different ways. The earliest, and the most numerous, is ' one-man ' business.

The organiser of the ' one-man ' concern invests his own capital and may also borrow some. He will rent a shop and have the service of an assistant, if necessary. He himself makes purchases and personally attends to the sales. He is his own manager. He initiates, organises, directs the work, and takes the entire risk. Thus the sole proprietor combines in his person the function of capital, enterprise and even labour in many cases.

Such a business is generally conducted on a small scale. In agriculture and retail trade of all types, the sole proprietorship system is the rule in most countries.

This form of business organisation offers several advantages.

(1) The combination of financial interest and the sole responsibility for running the business is conducive to efficiency. The individual entrepreneur works hard, long and late.

(2) All transactions and operations are, through prudent management, performed in the most economical manner ; and waste of all kinds is eliminated. No elaborate and costly account-keeping is necessary.

(3) It is possible to pay personal attention to all customers and give them entire satisfaction at minimum cost. Every change in tastes and fashions is noted and suitably met.

(4) The individual entrepreneur is in the best position to satisfy demand which is limited or fluctuating. Quick decisions can be made to meet rapid changes in business conditions.

(5) This form of business is also the easiest to start and the easiest to wind up. The individual owner is the only one concerned.

Within its limited sphere, this form of business organisation represents efficiency and economy of quite a high order.

But there are limitations also from which the individual entrepreneur suffers :

(1) The capital at the command of the sole proprietor is generally meagre which prevents expansion of business, however, profitable.

(2) Also one man feels very much handicapped in looking after the many sides of his business. This makes him forgo several economics and miss many opportunities of making profitable investment.

(3) No first-rate business can be built up in this way and no country can win industrial leadership when her business is organised in such a primitive manner.

(4) One-man business is generally run on a small scale. It cannot enjoy the advantages of large-scale production ,arising from the use of specialised labour and machinery, economy of space, economy in buying and selling, research and experiments, etc. It has few internal and external economies of which it can boast.

2. Partnership. Limitations of the one-man business give rise to another form of business organisation, *viz*., partnership. Two, three or more people combine, contribute capital, and agree to share profits and bear losses in agreed proportions. It is not necessary that everybody must contribute or contribute equally towards the capital of the business. A partner may simply contribute his ability. Similarly, it is not necessary that profits and losses should be shared in the same proportions. The terms of partnership are highly elastic. The responsibilities and the privileges of partners are laid down in the partnership deed which, however, can be modified by common consent. There is no State control so long as the activities of the firm are legal.

The partnership is a very suitable form of business for all medium-sized businesses, where personal efforts of the owners are essential, *e.g.*, flour mills, hosiery factories, furniture works, ice factories, sports goods factories, banking firms, etc. Although it is not so numerous as the one-man business, yet it is quite common and important.

Advantages of Partnership. This form of organisation offers several advantages :

(1) As compared with the individual entrepreneur, they have at their command larger resources. They have more capital, more business ability, and more man-power. Thus business can be run on a larger scale and more profits made.

(2) It is possible to establish wider personal contacts to the mutual advantage of all. Every partner is a link in the chain of business connections. In this manner, a partnership can build up l ot of goodwill.

(3) Business can be run on a larger scale enjoying the various economies of ' scale ', *e.g.*, economy of space, economy of tools, economy of specialised labour and machinery, economy in buying and selling, larger expenditure on research and experiments and publicity.

(4) The union of ownership and management is a spur to efficient and economical working. The partners have to bear the losses and stand to benefit if there are profits. Every partner, therefore, is supposed to be earnest about the business and is supposed to do his best.

(5) Partnership responds promptly to changes in business conditions and is very highly adaptable. The partners can take prompt decisions. There is no red-tapism. They are in constant touch and are always available for consultation.

(6) The existence of unlimited liability curbs the speculative tendencies of the partners, and prevents the launching of rash and risky enterprises. Any partner can be called upon to meet tne debts of the firm to an unlimited extent. Hence partner's exercise a restraining influence on the risky operations being undertaken.

The partnership type is said to be virile, elastic and efficient, if only its members can work in harmony.

Disadvantages of Partnership. If the partner work in close and cordial co-operation, the business is bound to go up. But this is a very big IF.

(1) In actual practice, partners behave in a selfish manner, doing the minimum and trying to get the maximum. In case of a mishap everyone blames everybody else. There are dissensions instead of harmony. It is no wonder that partnerships are shortlived and business constantly suffers.

(2) According to the law, partnership must be dissolved in the event of a partner's death, bankruptcy or lunacy. There is thus no continuity of existence. There is no knowing when the partnership may come to an end.

(3) But the greatest handicap is the unlimited liability. Every partner has the right to bind all others. In case of failure, the partnership debts can be realised from any of the partners. The unlimited liability makes the policy of the firm timid and unenterprising. Even legitimate risks are sometimes avoided and reasonable opportunities of making profits missed.

(4) Further, the partnership resources are too limited to enable the concern to do big business. Obviously the businesses of the scale of railways or shipping, transport, insurance, or iron and steel works cannot be undertaken by a partnership.

On the whole, this form of organisation cannot meet the requirements of modern trade and industry.

Limited Partnership. Generally the liability of partners is unlimited. But the law allows a partner to get his liability limited to a certain amount by agreement. Such a partner, however, cannot participate in the management. Also, even in a limited partnership there must be some partners whose liability is unlimited. All the partners of the firm cannot limit their liability.

3. Joint-stock Company. The joint-stock Company is undoubtedly the most important type of business organisation today. It seeks to remedy the disabilities and the handicaps of the partnership arising out of small financial resources and limited business talent.

Joint-stock companies are of two types :—

(*i*) Private limited companies, and (*ii*) Public limited companies.

Private Limited Company. The minimum number of members in a private limited company is two, and the maximum 50, exclusive of the employees. When a partnership business expands beyond the capacity of the partners to bear the losses, they can limit their liability by getting themselves registered as a private limited company. This device enables them to retain the control of business on their own hands.

This form of organisation offers all the advantages of a partnership—secrecy, promptness, self-interest leading to economy and efficiency—without its disadvantages arising out of the unlimited liability. A private limited company is not subject to any restrictions regarding minimum subscription of capital before it can legally start business ; nor need it file with the Registrar of Joint-stock Companies any annual returns or balance-sheet. It cannot, however, publicly invite the investors to subscribe to its share capital. The shares are also not transferable.

Most of the middle-sized industries are run in this manner. They are invariably converted into public limited companies ultimately, if the business goes well. This type of organisation is a device adopted by family concerns to retain. The control in their own hands enjoy the lion's share of profits and still avoid undue risks.

Public Limited Company. A public limited company is formed to overcome the handicaps associated with the private limited company. A minimum of seven persons can form a public limited company. There is no maximum. The promoters have to submit to the Registrar Joint-stock Companies, (1) *Memorandum of Association* giving the name of the company, its head office, its aims and objects, denomination of shares and the amount of the share capital, and a declaration that the liability of the shareholders is limited, and (2) *Articles of Association* containing the bye-laws of the company.

If the Registrar is satisfied that all legar requirements have been fulfilled, he will grant the certificate of incorporation. But the company cannot start business unless a certain minimum percentage of the issued capital has been subscribed. This is to safeguard the interests of the investors, lest a few gullible investors should be roped in and defrauded of their money by bogus company promoters.

The share money is not paid in lump sum. A small amount is paid with the application, then a certain amount per share on allotment of shares, and then further calls are made as and when the company needs money.

Within six months of the allotment of shares, the promoters must call a general meeting of all the shareholders called the statutory meeting which elects the directors. The promoters, who have floated the company and who know what is to be done and how it is to be done, are naturally elected the directors. Once in the saddle, they show no inclination to quit. With sufficient number of proxies in their hands, they manage to get themselves re-elected every year.

Shares and Share Capital. Authorised, Registered or Nominal Capital is the amount of the capital with which the company is registered. This is the maximum amount that the company is authorised to raise *issued capital* represents the amount of share capital which the public is invited to subscribe. *Subscribed capital* means the amount of the share capital actually sold to the people. *Paid-up capital* represents the amount actually paid by the shareholders.

The shares are preference, ordinary and deferred shares. *Preference shareholders* are entitled to the payment of a certain percentage on their capital before anything is paid to the ordinary shareholders. Preference shares may be *cumulative* when the dividend on them goes on accumulating from year to year at the fixed percentage. Or they may be *non-cumulative,* in which case the shareholders will get dividend for the year when sufficient profits have been made. Then there are *participating preference* shares which get a fixed percentage, and also further share in the profits, if the profits exceed a certain limit. *Ordinary shareholders* rank for dividend next to the preference shareholders. Then there are *deferred shares.* They are also called founders' shares. The holders of these shares get profit only after the claims of the other classes of shareholders have been satisfied. These shares are generally kept by the promoters for themselves, and are used as a device to pocket the lion's share of profits.

Joint-stock companies also raise funds by the issue of *debentures.* The debentures represent a long-date loan raised by the company. They are repayable after 10—15 years or even longer. The holders of debentures are creditors of the company. They must be paid interest —profit or no profit.

4. Merits and Demerits of Joint-stock Company. There are several advantages which can be claimed for this form of organisation.

(1) The company business is generally a large-scale business. Therefore it enjoys all the economies of large-scale production, internal and external, *e.g.*, economies arising from the use of specialised labour and machinery, economy of space, of buying and selling, publicity, research or experiments, etc.

(2) Besides these, there are several advantages peculiar to the organisation itself. Shares are of small denomination, and they suit all pockets and temperaments ranging from the cautious to the speculative. Hence large capital can be raised.

(3) The fact that liability is limited and shares are transferable, induces many people to subscribe to the share capital. Thus small and scattered amounts of capital are mobilised and turned into productive channels. Habit of thrift is strengthened. No entrepreneur of proved ability need suffer for lack of capital.

(4) The limitation of liability enables new risks to be taken and many new fields of business to be opened out. The actual loss, if any is widely distributed. The limited liability principle encourages the prospective investor. He need not be afraid of losing all. This also helps in raising large capital.

(5) From the point of view of the individual investors, too, it has great advantages. Not only is his liability limited, but he is also enabled to spread out his investment. He need not place all his eggs in one basket. Further, he is not wedded to the company for good. Whenever he wishes to leave, he can sell his shares.

(6) Unlike the partnership, the company is a legal person apart from the shareholders or directors. It can sue and be sued upon. It thus enjoys a perpetual existence. Further, it is on account of its everlasting existence that investors can be persuaded to invest money even though for years there may be no prospect of profit.

(7) Separation of function has been effected between the capitalist and the entrepreneur. This specialisation has enhanced produc-

tive efficiency, because formerly the capitalist often lacked business ability, while the entrepreneur often lacked capital. This principle, therefore, is the secret of economic progress of the nations.

(8) The management is democratic, efficient and economical. The directors are elected by the shareholders. They are supposed to be people with wider vision, administrative ability and business acumen. Their expert advice and guidance are available to the company at a very moderate cost.

Demerits. But there is the other side too.

(1) The management is democratic only in theory : it is actually oligarchical. The directors are practically self-appointed, and they remain there as long as they choose. For practical purposes the shareholders have little voice.

(2) Some of the directors may be unscrupulous and exploit the unwary investor. They use inside knowledge for their own benefit. For instance, they may falsely give out that the company is going to fail and when the value of shares goes down, they purchase them.

(3) Fraudulent publicity deceives the public. Rosy pictures given in the prospectus are sometimes utterly false. The public has no means to form a correct estimate.

(4) The directors are often lawyers or doctors and have no business experience or knowledge. Their only qualification is the share qualification. Such directors may not prove competent.

(5) Business is de-personalised. The owners of business, *i.e.*, the shareholders, are concerned only with profit. The welfare of the employees is utterly neglected. The paid managers express their helplessness. This loss of human touch is a great loss. The business becomes purely a mercenary affair.

(6) The liability being limited and the shares being transferable, the sharholders take no interest in the company. Few of them attend the shareholders' meetings. Their apathy throws all the powers in the hands of few directors. Thus the company loses its democratic character.

(7) Sometimes the directors launch rash enterprises, because it is easy to play ducks and drakes with other people's money. The company may suffer unnecessary loss.

(8) The organisation is too ponderous and uwieldy. It cannot take quick decisions. It is only suited to business which can be reduced to set rules, which are both fool-proof and knave proof. This form of organisation is not fit for pioneering work, or where changing conditions require constant changes in policy of production, or where customers are won with difficulty and lost at the slightest pretext.

In spite of these shortcomings, it must be said that, in the absence of the joint-stock principle, industrial development and efficient exploitation of the natural resources of a country would not have been possible. It has proved to be a powerful and an efficient engine of production. All leading businesses are now associated with this form of organisation.

5. **Holding Company**. The 'holding company' represents a device by which one company comes to acquire control over another. The device generally adopted is to purchase the majority of the shares of another company. The company, which buys the shares and thus comes to control another company, is called the *holding company* ; and the company, whose shares have been so acquired and which comes under the control of another company, is known as the *subsidiary company*. Sometimes a company is formed for the avowed purpose of purchasing the bulk of the shares of some going concerns. In some cases, the holding company is itself a going concern, and it decides to buy out other companies which may be competing with it.

The device of a holding company is found very useful in reaping *economies of integration*. Advantage is taken of the technical and expert staff of the other company ; common purchases of stores and materials can be arranged with all the attendant economies. There are administrative economies arising from a common management ; and patents can be pooled. When trustification is not found feasible on account of unwillingness of certain units to efface themselves, the holding company device proves quite handy. It is as advantageous as a trust and better than a cartel for the latter cannot be sure of the loyalties of its members.

There are less commendable aspects of the holding company too. The controlling group may just have a bare majority of the shares and ride roughshod without caring for the big minority of the shareholders. This device is contagious ; it spreads its tentacles far and wide, and builds up a long chain of satellites or subsidiaries. The shareholders' money is used, but they are deprived of any effective voice in the affairs of the company. It is so unfair and undemocratic.

There is another drawback of the holding companies from the public point of view. If the subsidiary happens to be a private company, it is under no legal obligation to file any return or balance-sheet with the Registrar of Joint-stock Companies. The holding company may not disclose how the subsidiary company is faring in business. The public is thus kept in the dark about its real position.

In Germany holding companies are very common. The banks maintain financial interest in several industrial concerns, and there is interlocking of directorates. It is a rare phenomenon in India. The nearest approach is the managing agency system under which a private firm of managing agents runs banks, insurance companies, cement factories, sugar factories, paper mills, airways, etc. This system makes available economies of integration both in distribution and production.

6. **Co-operative Organisation.**—*Producers' Co-operation.* As distinguished from the ordinary 'capitalist' enterprise, there is the co-operative enterprise. The workers are painfully aware of the fact that the entrepreneur takes away the lion's share of profits. Being convinced that they could themselves run the industry without the aid of the entrepreneur, the workers decide to take up the entrepreneurial work upon themselves. They contribute some capital themselves and borrow the rest ; they elect their own foremen and managers and employ some staff. After paying all expenses, interest

on capital, salaries and wages, the profits are divided among themselves. This type of Co-operation is called the *Productive Co-operation* or *Producers' Co-operation.*

Producers' Co-operation has been generally a failure. The reasons are not far to seek. With the disappearance of the entrepreneur profits also disappear. It is his initiative, power of direction and organising ability which produce profits. The workers are not in a mood to pay well their managers. The elected foremen are not able to enforce discipline over their own people. Everybody's business is no body's business. Little wonder that there are no profits.

Consumers' Co-operation. There is another type of co-operation which has a long record of success. It is *Consumers' Co-operation.* The arrangement is that the consumers of a locality contribute capital in small shares and start a store of their own. They buy goods from wholesalers like other dealers, and sell these goods to their members at the ordinary market rates. Profits are distributed among the members in proportion to their purchases or, what is more common. in proportion to the share capital. Generally share capital is equally contributed and profits are, therefore, also equally divided among members.

An elected managing committee manages the affairs generally without pay. The management is, therefore, democratic and honorary. The business is very simple and does not require much commercial insight and ability to run it. The store keeps a few standard. quality goods and does not attempt to provide a wide selection. It is consumers' own shop. They are, therefore, not very exacting in their demands and are easily satisfied. Nor overhead charges for advertisement and canvassing need be incurred. The market is assured.

These co-operative stores have been a splendid success and some of them count thousands among their members. In several cases they have not contented themselves with merely retailing consumers' goods but have added their own manufacturing organisations. They are run on ordinary capitalist lines employing high grade managers working under the control of able committees.

The co-operative movement has proved specially suited to agricultural and allied occupations. It was successfully applied first in Germany and Denmark, and it has now spread to almost every country. In India, Co-operative Departments are functioning in every State. Mostly these are agricultural credit societies, but non-credit and non-agricultural societies are also being established.

7. **State Enterprise.** In every country, there are many public undertakings run by Central or State Governments or local bodies. Postal and Telegraph arrangements are generally under the Central Government ; and public utility services like water supply, gas, electric supply or tram or bus services are managed by municipal corporations.

The organisation of State enterprise is on the same lines as private enterprise with the usual paraphernalia of general manager, foremen, works manager, accountants, treasurer, departmental heads, and so on. The work is done generally in the same manner as in a joint-stock company.

But there is a fundamental difference. All the employees are government servants with fixity of tenure and prospect of getting a pension on retirement. The capital is provided from the State coffers, which comes ultimately from the tax-payers. The profits if any, too, go to the State.

Merits and Demerits of State Enterprise. State enterprise has certain advantages of its own. The credit of the government stands higher than that of any private individual or company. The State has, therefore, a special facility in raising capital and on favourable terms.

Further, government is in a position to command the best talent. Government service attracts first-class brains. There is a certain glamour about government service. Thus, from the point of view of the human factor too, the State enterprise is favourably placed.

The State enterprise is generally a monopoly. It has all the advantages of monopoly. The custom is assured. Expenditure on publicity is unnecessary. Better service at less cost is the usual rule in a government undertaking.

Demerits. But economists are generally agreed that governmental machinery, in the matter of running a business, compares very unfavourably with private management. The government manager's tenure is fixed. He gets a fixed annual increment, and will get promotion according to seniority. He cannot, therefore, be expected to show the same degree of initiative or hard work as the manager of a private company. The latter may receive notice to quit any fine morning, if the directors are convinced that he is not doing his best.

A government employee will not be much interested in lowering costs or improving the methods, because he himself will gain nothing thereby.

The State employee, who has no ambition to rise, can flout the senior officers, At the most, he will be transferred or his increment stopped if it comes to the worst. He does not consider himself the servant of any particular person, but the servant of the impersonal State, and that makes all the difference.

In a government-managed enterprise, routine replaces responsibility. There is the tyranny of the desk or red-tape. There are exasperating delays. A paper has to pass through very many hands, none making any material alteration or improvement.

Frequent transfers, nepotism and entry into service by the backdoor, merit being not necessarily the test of promotion, are some of the drawbacks in a government enterprise.

If there are losses, nobody seems to bother. There is no counterpart of the shareholders whom the directors have to face every year. The tax-payers are dumb. If there is loss, nobody really feels that it is his loss. Their representatives in the legislature will no doubt raise a hue and cry, yet the government usually has a comfortable majority, and the caravan continues to move on.

It is, therefore, suggested that only safe businesses, which are of a strictly routine type, where there is no question of winning markets and striving to maintain them, and which enjoy practically a monopolistic position, can be entrusted to the State. The idea is not to make profit but to ensure purity and regularity of service so that the public is not placed at the mercy of profit-grabbing entrepreneurs.

We feel, however, that government weakness in business has been exaggerated. In big business, whether owned by government or private companies, the same red-tapism rules. There is the same lack of initiative.

The success of the Russian experiment has exploded the myth of Government inefficiency. The achievements of Russian five year plans may be described as sensational. People will now think twice before condemning the Russian methods which mean State enterprise. A people's State can inspire and galvanise its citizens so that entirely new values are created. It is no longer possible to argue on old premises. The sphere of State enterprise is bound to extend further and further. The achievements of State enterprises in India are no less than those of private enterprises.

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CHAPTER XV

MONOPOLY

1. Meaning of Monopoly. What is a Monopoly? It sometimes happens that a producer or a group of producers comes to acquire a more or less effective control over the supply of a commodity. They are thus enabled to exercise a perceptible influence over its price. They may be said to monopolise the commodity or to constitute a monopoly. *The essence of a monopoly is the ability to influence the price.* It implies an elimination of competition, complete or partial. A monopolist is a sole producer of a commodity ; it is the only firm in the industry ; hence the firm is the industry. "The pure monopoly, as we may call it, will occur when a producer is so powerful that he is always able to take the whole of all consumers' income whatever the level of his output. This will happen when the average revenue curve for the monopolist firm has unitary elasticity (that is, rectangular hyperbola) and is at such a level that all consumers spend all their income on the firm's product whatever its price."[1]

But it is very seldom that competition is completely eliminated. Just as perfect competition is rare, an absolute or pure monopoly is also something very rare. In the real world, there is no sole producer, neither a monopolist is an imperfect competitor. There is monopolistic competition. In the economic jargon the term 'monopoly' refers to various forms of combinations among the manufacturers, *e.g.*, trusts and cartels.

Monopolies are sometimes classified as natural, legal, social and voluntary. The natural monopolies are due to natural scarcity. Legal monopolies arise from patent right. Social monopolies refer to public utility services like gas, electricity and water supply. Voluntary monopolies are the result of voluntary agreements among the producers and refer to various forms of combinations. The agreements take the form of (*a*) reduction or regulation of output, (*b*) fixation of price and other terms of scale, and (*c*) division of territory.

2. Types of Combinations. There are several well-known forms of business combinations. It is a *horizontal combination* when the amalgamating concerns are engaged in similar lines of production. The combination is said to be *vertical* when they combine different stages of production, *e.g.*, spinning and weaving. The two well-known forms of combinations are trusts and cartels.

Trust. When several companies amalgamate and create a new company altogether it is called Trust. The companies joining the combination completely lose their entity, and an entirely new concern is created. It may also be called a merger. All the existing cement companies in India formed a merger in 1936 under the name of A.C.C. (Associated Cement Companies of India).

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[1] Stonier and Hague—*A Text-Book of Economic Theory* (1953), p. 105.

Cartel. But in case the firms joining a combination do not wish to lose their separate entity, they form a Cartel. These concerns continue to function as separate producing units under their own managements, and yet hand over their output to a common selling organisation. The Indian sugar mills formed an All India Sugar Syndicate in 1936 and entrusted to it the marketing of all the sugar produced by them. The term 'Cartel' refers to such arrangements.

Certain differences between a Trust and a Cartel may be noticed. In the case of Trust, one new concern replaces the constituent concerns, whereas in Cartel they retain their separate existence. In a Trust, both production and distribution are under one centralised control, whereas in Cartel only distribution is subjected to central control, but production is conducted under separate managements of individual firms. The Trust is permanent organisation, the constituent firms having effaced themselves completely and irrevocably; on the other hand, a Cartel is generally shortlived. The firms joining the Cartel constantly look to their own individual interests and leave the combination whenever it suits them. In some respects a Cartel is superior to a Trust. It is more flexible. It leaves the producers free to make independent arrangements as efficiently as they can. There is little danger of over-capitalisation from which a Trust often suffers.

Holding Company. We have already discussed the way in which a company comes to acquire a controlling interest in another company (Ch. XIV, Sec. 5.) The Standard Oil Company of New Jersey is said to have controlled about 40 oil companies in 1911. The Punjab National Bank controls the National Bank of Lahore. The Dalmia Co. acquired a control over the Bharat Insurance Co.

Pool. The term 'pool' generally refers to agreements for dividing the markets, sharing profits and limiting the output. They are very common among ice factories. Their popularity is due to the fact that the arrangements are very flexible : they are easily formed. They exercise a very desirable control over prices and output. But their chief disadvantage is that they are temporary, and the arrangements lack stability. Disputes are very frequent. They are dissolved as easily and quickly as they are formed.

Ring. The combination among the shippers is generally known as a 'ring' or a 'conference'. The shipping companies get the better of their rivals through devices like deferred rebate system.

Corner. The term 'corner' refers to the attempts at controlling the supply of a particular commodity. If a *Marwari Seth* (or a group of them) tries to buy the entire Indian crop of cotton in a season so that they may be able to charge later a very high price, it will be called a 'corner'. In view of very large output and the improved means of communication and transportation such attempts are doomed to fail these days.

3. Factors Favourable to Combination[1]. There are several factors which conspire to bring into existence large combines. Anything which facilitates co-operation, or compels concerted action in self-interest, will lead to the formation of combination. The following are some such factors :—

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[1] For a recent view *see* Joan Robinson, "Imperfect Competition Revisited," *Economic Journal*, 1952.

(*a*) Natural scarcity or control over certain essential raw materials gives rise to a monopoly.

(*b*) Imposition of tariffs necessarily limits or weakens foreign competition. Tariff is said to be the mother of trusts. Free from foreign competition, the home manufacturers combine to eliminate competition at home so as to maximise their profits.

(*c*) When the number of manufacturers is very small and the industry is concentrated in a particular locality, combination is easy. The number of manufacturers in the field will be small if either the State imposes restrictions on new entrants or the capital outlay required is very large.

(*d*) If the rival firms are of equal strength, they feel inclined to combine. A big firm does not ordinarily like to combine with weaker rivals whom it can easily crush.

(*e*) *Standardised Product.* If the output is of one uniform quality, then there is nothing to distinguish one manufacturer from another. It will then facilitate a combination.

(*f*) The traditions in the country favouring joint action also lead to the formation of a combination.

Among conditions of monopolisation or appearance of monopoly power, Prof. Pigou mentions two :

(*a*) When it is economical for the typical individual establishment in the industry to be large ; and

(*b*) When it is economical for the typical individual unit of business to be large, *i.e.*, when a number of establishments are controlled by one authority, *e.g.*, the Managing Agency system in India.

"The key to the success of a monopoly," says Benham, "is restriction of output." Unless the monopolist can control the supply his monopoly power will collapse. With this end in view he must restrict new entrants into his business. Benham says : "The circumstances which prevent or deter newcomers, and thus enable output to be restricted are the foundations upon which the power of monopoly is based". Control of something essential in production, the need of expensive and specialised plant and patent rights will generally keep the new entrepreneurs out of his field and maintain his power.

4. **Circumstances Unfavourable to Combination.** There are certain circumstances, however, which are adverse to the formation of a combination. If there are no special difficulties in the way of new entrants, then a combination or monopoly will be very unlikely. If the producers are scattered, and each contributes only a small output to the market, a combination will be difficult. If the quality of the commodity is the most important consideration and personal attention is necessary, chances of a big combination producing such a commodity will be remote. Also when certain producers are in a strong monopolistic position already, there will be little inducement for them to join a combination.

Forces that Threaten a Combination. Besides, it is not always easy to maintain a combination once formed. It constantly feels the impact of two sets of forces which threaten and disintegrate it. These forces may operate both from within and from without.

Within the combination, there may be certain firms which begin feeling restive and find that the agreement is putting too great a strain on their loyalty. They do not find the combination working to their advantage. Probably some of the constituent firms have made technical improvements and feel that they can look after themselves. They may hope to capture the market if they are not restrained by the agreement. They may have to work below capacity, and they know that unused capacity means a dead loss. Probably the assignment of quotas is considered to be unjust. Combination is a device sometimes to meet bad times, and when the times change the combination appears to be no longer necessary. The efficient ones feel that they are making a sacrifice to keep the less efficient ones alive. Thus the changing conditions of trade and industry make it very difficult, and sometimes impossible, to retain the loyalty of all the firms in the combination. Desertions are frequent.

But these are not the only disintegrating forces. There are also forces invading from without. The pressure of the new firms sometimes becomes too great. The new firms are under no necessity to resort to short-time working on which the old firms may be working to prop up the price. They take advantage of the higher prices maintained by the combination, but work themselves to full capacity. To prevent this increased production depressing the market the combination must further restrict output. Thus the outsiders or the new firms gain at the cost of the combination. When this pressure from outside becomes too much, the combination has to be dissolved and freedom of action restored to all members. The members of the Indian Jute Mills Association experienced this difficulty in the early 'thirties. The Association had to restore liberty of action to their members and put an end to the agreement.

Threatened by forces from within and from without, a combination cannot last long.

5. Merits & Demerits of Monopolies[1]. Monopolies are generally big concerns and as such they are able to realise all the economics of large-scale production. They can ensure regular and satisfactory supply and having large resources are able better to stand bad times. A combination can use inventions and trade marks of all the members. They also enjoy the benefits of the joint-stock principles. Besides, they have certain advantages arising out of their monopolistic position. As such they are able to effect economies in buying and selling. They command superior skill and are therefore able to attain higher levels of efficiency. On the distribution side, they can manage their sales departments more economically since they need not spend much on publicity.

The existence of monopolies affects consumers, the quality and the quantity of the goods as well as the use and the remuneration of the factors of production :

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[1] For a brilliant defence of monopolies *see* Schumpeter's *Capitalism, Socialism and Democracy.*

(*i*) The remuneration of the factors of production is diminished because the demand for their services under monopoly is less than it would be in the case of competing firms.

(*ii*) In a combination, a quota is usually assigned to each firm so that it has to work below capacity. Some productive resources, therefore, remain idle.

(*iii*) As the quotas come up for revision periodically, each firm is anxious to secure an increased quota at the next revision. For that purpose additional equipment is quietly installed during the currency of the agreement by all the parties. The cumulative effect is that surplus capacity is created in the industry.

(*iv*) Another consequence of quota arrangements is that the production is also carried on in less efficient units. The more efficient units have to work below capacity to enable the weak ones to survive. This is obviously detrimental to consumers' interests, because the costs are higher than need be.

(*v*) Under a monopoly, the factors of production are not distributed in keeping with the preferences of the consumers but according to the monopolist's own judgment. Monopoly, therefore, seriously limits the sovereignty of the consumer and prevents the factors from seeking their maximum reward.

(*vi*) The monopolist stands in the way of new capital and enterprise entering the industry and prevents their entry into the industry. The infusion of new blood might prove of great advantage to the community. The monopolist deprives the community of this advantage by ruthlessly crushing rivals.

(*vii*) The monopolist also retards technical progress. He is anxious to maximise his profits. It is sometimes not worth his while to replace his old equipment by a modern one. No fear of competition compels him to reduce his cost by making use of the new processes and new inventions. Under competition the firms which make use of the latest appliances will be ahead in the race. This stimulates the application of invention to industry. But a monopoly deprives the consumers of the benefits of the more modern and efficient method of production.

(*viii*) Output under a monopoly is less than it would be under competitive conditions. Lest the market should be spoiled, output is deliberately restricted or destroyed. Over two million tons of coffee were destroyed by the Coffee Institute of Brazil between 1931 and 1934. Some productive resources are deliberately kept idle, or plant and equipment worked below capacity, if full working is likely to reduce monopoly profits.

(*ix*) Monopoly prices are generally higher, although there is every reason that the price under monopoly should be lower. The monopolist has greater access to economies, internal and external. He can make full use of the 'indivisible' equipment. He need not spend much on canvassing and publicity. He is at an advantage in buying and selling. The size of his plant can be nearer the optimum one. The monopolist, therefore, is in an exceptionally strong position to reduce costs. Yet, we find that the prices charged by the monopolists are generally higher than under competition. Human nature being what it is, he exploits his monopolistic position to the fullest advantage. Thus *although the monopoly need not be detrimental to consumer's interest, yet it actually is.* Monopolists also inflict sometimes unfair terms on their customers or accord them discriminatory treatment.

(*x*) Finally, we may note that monopolies have an adverse influence on wealth distribution. The monopolists are rich and the tendency for them is to become richer and richer. Thus the existence of monopolies accentuates inequalities of wealth distribution.

(*xi*) The monopolists bribe legislators and thus bring down business morality as well as public morality.

6. Recent tendencies towards Monopolies. There was a time when combinations in trade and industry were looked at with suspicion. They were regarded as positively antagonistic to the interests of the community at large. Anti-trust laws were passed in America and Governments everywhere kept a vigilant eye on the combination movement. They were considered dangerous.

But this view has undergone change. The combination movement is no longer regarded as inimical to public interest. Rather, they are now regarded as essential if industry is to be rationalised. After World War I, the German industry had to rationalise. Internal competition was eliminated and the competing units were put together under one organisation, controlling both production and distribution. The combination movement in Germany produced wonderful results. The movement then spread to America, Japan and other countries. Everywhere the State took active interest in bringing about combinations. The Great Depression gave special fillip to the combination movement as rationalisation was considered essential for the reorganisation of the industry and for placing it on a sound footing. Monopoly is, therefore, very closely associated with industrial efficiency.

7. Checks on the Monopolist. It will perhaps seem that the monopolist would be able to charge whatever price he liked, his sole consideration being to maximise this profit. But the monopolist cannot, in actual practice, behave like an autocrat. There are several checks on the abuse of monopoly power :

In the first place, a monopolist is always afraid of *potential rivals*. If he charges too high a price, some other entrepreneurs will surely enter the field to take advantage of the high price and wrest from him a share of the high profits that he is making.

Secondly, the consumers may not take it lying down. There is a limit to their exploitation. An increase of one pice in the price may prove to be the last straw on the camel's back. *The consumers may actively organise a boycott.* No monopolist can afford to alienate the sympathies of his customers.

Thirdly, there is hardly any commodity for which *substitutes*, more or less satisfactory, cannot be found. The monopolist's rapacious tendency can be effectively checked by resort to substitutes. The consumers are willing only to allow a certain margin between the price of the monopolised product and the substitute. As soon as the margin is exceeded, the substitute comes in.

Fourthly, the monopolist cannot ignore the *conditions of demand* and take independent unilateral action. He is bound to consider at every step the state of demand. If the demand is elastic, the monopolist's position is correspondingly weak.

Fifthly, we have seen that a combination is constantly *threatened* by forces from within. It is not so easy to maintain a combination. It is usually a house divided against itself and they cannot, therefore, do as they please.

Finally, there is the fear of *State intervention*. The State as the custodian of the interests of the general public cannot allow a monopolist to exploit the community. If need be, it is prepared to intervene. This acts as a wholesome check on the autocratic tendency of the monopolist.

8. Public Control and Ownership of Monopolies.[1] The monopolist generally reduces the output so that he may be able to charge a higher price and increase profit. This is certainly an antisocial attitude. The State, as the custodian of public interests, must intervene to curb the profit-hunting propensity of the monopolist and to safeguard the interests of the customers.

The possible measures for the control of monopolies are :

(*i*) *Trust-preventing and Trust-breaking Legislation.* Anti-trust laws, like the Sherman Anti-Trust Law of 1890 and the Clayton Anti-Trust Law of 1914, were passed in America. Laws against cartels were passed in Germany and Austria. But such laws were not always effective. When one form of combination was declared illegal, the lawyers' ingenuity suggested another. Sometimes informal understandings took the place of formal agreements. The memorandum submitted by the Board of Trade to the Committee of Trade and Industry in England in 1927 showed that the legislative control was only partially successful.

(*ii*) *Suppression of Unfair Practices.* Prof. Pigou suggests that the State should preserve potential competition and *control the 'clubbing devices'* which frighten away the potential competitor ; these devices are destructive dumping, or cut-throat competition and boycott. But he comes to the conclusion that " attempts to maintain potential competition by preventing the employment of clubbing devices can at best be only partially successful ". He says "that a policy of legal prohibition against the exercise of clubbing methods cannot easily be rendered proof against evasion ".

(*iii*) *Control of Prices and Profits.* The State can regulate the monopolies by controlling profits and prices. But there are practical difficulties. It is not so easy to hit on a price which is reasonable for the consumer and fair to the producer. But it is worthwhile to attempt the task of regulating the monopolies. Purchasers' associations can also be organised.

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[1] For limitations of public control in a world of monopolies *see* J. K. Galbraith's *American Capitalism.*

(*iv*) ***Publicity***. The Committee on Trusts in England suggested in 1918 publicity and public supervision as useful antidotes to the abuse of monopolistic authority. It suggested that periodical investigations may be conducted in the affairs of the monopolies and the searchlight of publicity focussed on their doings. It is expected that this will keep them in proper trim.

About the efficacy of State control over monopolies, Prof. Pigou concludes : " Under any form of State control over private monopoly a considerable gap between the ideal and the actual is likely to remain. The method of control, whether positive or negative, is, in short, an exceedingly imperfect means of approximating industry toward the price level and output proper to simple competition. Moreover, it is apt to prove a costly method." As Prof. Durand observes, "Government regulation of prices and profits of private concerns always involves a large element of waste, of duplication of energy and cost."

(*v*) *Nationalisation or Public Operation*. Finally, the monopolised business may be nationalised. When the business is of a purely routine nature and the market is assured, it can be safely owned by the State. In such an industry, there is not much room for individual initiative and personal attention of the entrepreneur. The business can be conducted by a foolproof administration. Public utility services can be, and should be, nationalised. In view of many technical difficulties in the way of public control over private enterprise, Prof. Pigou advocates public operation on the ground that it will bring about a right distribution of resources among different occupations and thus promote the economic welfare of the community.

9. **Monopsony**. '*Monopsony*' is the term applied to buyers' monopolies. If the seller says, "Buy from us, or you don't buy," the buyer can retort, "Sell to us or you don't sell". There will be a case of monopsony when a purchasing agency is buying the bulk of a commodity produced by a competitive industry. This will happen when (*a*) the consumers of that commodity are organised, (*b*) a certain group of consumers, who are in a position to act collectively, have a liking for a commodity which none else requires, and (*c*) a government adopts a policy of import control. The big meat packers in South America found this out during World War I. The buyer was the British Government, which had the power to control the refrigeration space on ocean vessels.[1] Another similar case was the American automobile manufacturers who by working together were able to bring down the price of rubber—a Dutch monopoly. Another instance of a buyers' monopoly is the employer of a particular kind of skilled labour which has no alternative market.

But buyers' monopolies are very rare and more difficult to maintain than sellers' monopolies.[2] The buyers can maintain their monopoly power only by restricting their purchases of essential commodities. But in that case they inflict as much punishment on themselves as on the sellers (*e.g.*, buyers of milk in a town, supposing they acted as one).

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[1] Knight, B. W.—*Economic Principles in Practice*, (1940), p. 177.

[2] *See* Galbraith's *American Capitalism*, for the concept of countervailing power.

The buyers are scattered throughout the length and breadth of a country and sometimes the whole world. It is very difficult for them to organise themselves. It is very seldom that the consumers can form a combination. The consumers can buy from another shop if they are not satisfied with the behaviour of certain shopkeeper. But if the product is a monopolised one, it is difficult to see what the consumers can do. They must pay the price or go without the commodity.

The buyers' monopolies are particularly ineffective if the demand for the good is inelastic. They cannot do without it. The seller is in a stronger position and can smash any purchasers' combination. Moreover, alternative markets are always there.

The only effective way for the consumers is to club together and form a co-operative store of their own. But this is an admission of the fact that they were not able to dictate their terms to the producers.

Thus we conclude that the buyers' monopolies are rare, weak and ineffective wherever they exist.

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CHAPTER XVI

EXCHANGE—MARKETS

1. Meaning of Market. "Originally", says Jevons, "a market was a public place in a town where provisions and other objects were exposed for sale ; but the word has been generalised so as to mean *any body of persons who are in intimate business relations and carry on extensive transactions in any commodity.* A great city may contain as many markets as there are important branches of trade, and these markets may or may not be localised.........But the *idea of locality is not necessary.* The traders may be spread over a whole town, or region, or a country and yet form a market, if they are, by means of fairs, meetings, published price lists, the post-office or otherwise, in close communication with each other."[1] In the words of Cournot, a French Economist, "*Economists understand by the term market not any particular market place in which things are bought and sold but the whole of any region in which buyers and sellers are in such free intercourse with one another that the price of the same goods tend to equality easily and quickly.*"

Thus the essentials of a market are : (*a*) Commodity which is dealt with ; (*b*) the existence of buyers and sellers ; (*c*) a place, be it a certain region, a country or the entire world ; and (*d*) such intercourse between buyers and sellers that only one price should prevail for the same commodity at the same time.

(*a*) The markets may be classified on the basis of *area* as local, national and world markets, and (*b*) on the basis of *time*, as market price on any particular day or moment, short-period price, long-period price, or secular markets covering a generation.

2. Evolution of Markets. Markets were not always as we find them today. They have taken their present shape through a long process of evolution. The evolution of markets may be studied from two points of view : (*a*) Geographical, and (*b*) Functional.

Geographically, there are four stages of development : (1) family *market* when exchanges are confined among the members of a family ; (2) *local market*, when buyers and sellers belong to a town or village; (3) *national market*, when the whole nation may be regarded as one market, and (4) the world market, when market for certain goods embrace the whole world.

Local, national and world markets are to be found side by side. Some goods have only a local market, *e.g.*, fresh milk, others a national market, *e.g.*, shares of an Indian scheduled bank, and still others have a world market, *e.g.*, jute, cotton tea, precious metals, etc. Geographical development has depended upon the development of transport and of scientific devices like refrigeration.

As regards *functional development*, markets are : (1) the *general or mixed market*, when a great variety of articles are purchased and sold in the same market. (2) *The specialised market, i.e.*, separate markets for each commodity, *e.g.*, markets for cotton yarn, cloth, labour market, money market, foreign exchange market, stock exchange, produce exchange, etc. (3) *Marketing by samples.* When goods are standardised and buying and selling take place on the basis of samples. (4) Finally, *Marketing of grades.* When the quality of commodity is exactly defined and named so that even seeing of the sample becomes unnecessary. No. 591-C and 8-A are well-known varieties of wheat and 4-F and M.G.F.G. are well-known varieties of cotton in India.

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[1] Quoted by Marshall—*Economics of Industry*, pp. 134-35.

3. The Extent of the Market. The size of the market depends upon several factors :

(1) *The character of commodities.* In order to have a wide market a commodity must be (*i*) portable ; (*ii*) durable ; (*iii*) suitable for sampling, grading and exact description ; and (*iv*) such as its supply can be increased. Such commodities are wheat, gold, government securities, etc. Bulky articles like bricks and perishable articles like fresh fruit and vegetables have a narrow market.

(2) *The nature of the demand for the commodity.* A commodity, which is in universal demand (*e.g.*, gold and silver) will have a wide market.

(3) *Development of the means of communication and transport* has enabled things to be carried long distances and has widened the markets.

(4) *Peace and security.* Obviously goods cannot be marketed in distant places unless peace and order prevail. In war-time, due to insecurity in war zones, markets get restricted.

(5) *Currency and credit system.* If the currency and credit systems are well-developed, marketing can be conveniently and profitably carried on over extensive areas.

(6) *The policy of the State.* Markets may be restricted by the policy of the State. Prohibitive duties and quotas restrict the market.

(7) *The degree of division of labour.* We have seen in a previous chapter (Ch. IX. sec. 5) how division of labour is limited by the extent of the market. The converse of this is also true. The extent of the market also, in its turn, depends upon the degree of division of labour. The greater the division of labour the cheaper the articles and wider the market.

4. Market Categories : Perfect Competition. The environment in which the firms in an industry operate can be studied under perfect competition and imperfect competition.

We speak of a market as being perfectly competitive, if the individual firms in that industry have no control over the price of the commodity, *i.e.*, a firm has to take the prevailing price as given, which it cannot influence either way by its own action. What a firm does under perfect competition is to adjust its output to the prevailing price. In order that the individual firms should have no control over price of the commodity, the following conditions are necessary :

(*i*) The firm should have no control over the supply of output.

In order that this condition should be satisfied, it is necessary that every firm should produce a small part of the total output of the industry, *i.e.*, there must be a large number of buyers and sellers in the market. Each seller thus produces under the assumption that he can sell as much as he likes at the prevailing price.

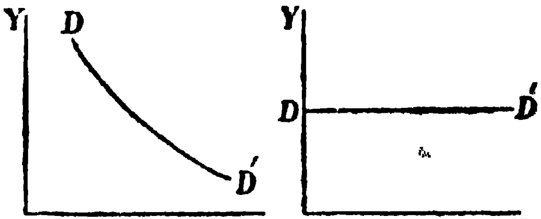
(*ii*) The commodities to be dealt in must be standardised, *i.e.*, no particular significance be attached to the product of an individual firm. If the products are not identical then one cannot say that a firm will have no control over price, because a firm can control the price of a specialised product or a product which can be differentiated.

(*iii*) Buyers should also be standardised, *i.e.*, they should not attach importance to any particular seller. If they do so, then this particular seller's product is not the same as of others in the market.

(*iv*) There should be perfect freedom for firms to enter and leave an industry *i.e.*, no firm should have any control over scarce materials. This condition would ensure that no firm can by its own action control significantly the amount supplied. There should be perfect mobility of the factors of production.

(*v*) For a uniform price to prevail, it is necessary that the buyers and sellers are fully aware of one another's intentions. If a particular seller is offering his output at a lower price than other, all the buyers should know it. They will then immediately rush to him. The result will be that either the other sellers will have to lower their price also to attract customers or soon the output of this particular seller will be exhausted. The price will have to be raised again to the level of other sellers.

We may conclude that under perfect competition a firm has no control over the price of the commodity. It takes the price to be given and proceeds on the assumption that it can sell as much as it likes at the ruling price. We may represent this result with the help of a diagram where a perfectly elastic demand curve DD. (Fig. *ii*) facing a firm is horizontal straight line at the ruling price, though the industry demand curve will be a falling curve. (Fig. *i*).



(*i*) (*ii*)

Fig. 27.

5. **Market Categories : Imperfect Competition.** In real life competition is never perfect. Various factors may combine to make competition imperfect :

(*i*) *Product differentiation.* A commodity, though in the main serving the same purpose, may be branded differently by the producers, *i.e.*, Maclean Tooth Paste *versus* Binaca Tooth Paste. If in the mind of the consumer one is not a perfect substitute for the other, the producer may be said to have some control over the price of his brand.

(*ii*) The buyers and sellers may not be aware of each other's intentions regarding price offers or quantities offered and demanded.

(*iii*) The knowledge may not be lacking on the part of buyers and sellers about each other's price policies, but they may lack the ability to make use of that knowledge. Habit, conservatism, prejudice, etc. may prevent their buying from the cheapest seller or selling to dearest buyer.

(*iv*) The transport costs may amount to product differentiation. Transport costs may be a barrier against price uniformity and they may prevent people from going to the cheapest seller.

The demand curve facing a firm under imperfect competition is not perfectly elastic at the ruling price (OD) as under perfect competition (DD). It is a falling curve with less than infinite elasticity (DD). This is because of various factors mentioned above, a firm has a certain control over price. Products may not be standardised and buyers may prefer one brand (say, Hamam soap to Lux) or may prefer one shop to another on account of its being cleaner or because of its snob appeal, its better situation or on account of the attractive personalities of sales people. The result is that the buyer is willing to pay more for a particular brand or, even if the price is the same for another brand, he prefers one to the other.

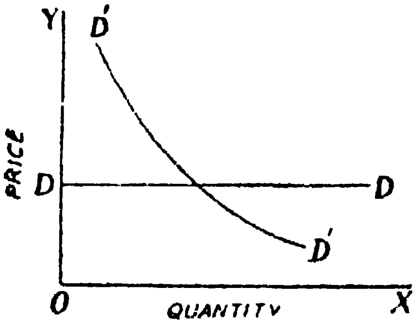


Fig. 28.

If the seller of a differentiated product raises his price a bit he will not lose all the customers (as under perfect competition) nor can he win all the customers from other sellers by lowering his price a little. Hence the sloping demand curve.

Under perfect competition, if the price rises beyond OD, the firm will lose all its customers but under imperfect competition some buyers are willing to pay a higher price than OD for the product of this particular firm. Under perfect competition, if a firm lowers its price a little below OD, it will be able to sell as much as it likes but under imperfect competition only a limited number of customers will be attracted with a price fall—because customers may have preferences for other brands and they may go on purchasing them even at their old and now relatively higher prices.

We have thus seen that under perfect competition no individual seller can, by changing his output, hope to affect the market price. But under imperfect or monopolistic competition, he can exercise more or less influence on the price he receives. Like a monopolist he can either fix the supply he wishes to place on the market or fix the price of his product.

6. Perfect and Imperfect markets. A distinction may be made between perfect market and imperfect market. This corresponds to perfect and imperfect competition. "A market is said to be perfect when all the potential sellers and buyers are promptly aware of the prices at which transactions take place and all the offers made by other sellers and buyers, and when any buyer can purchase from any seller and conversely. Under such a condition the price of a commodity will tend to be the same (after allowing for cost of transport including import duties) all over the market." Every quality of the commodity is regarded as a separate commodity. The prevalence of the same price for the same commodity or the same time is the essential characteristic of a perfect market.

On the other hand, a market is imperfect when some buyers or sellers or both are not aware of the offers being made by others. Naturally, therefore different prices come to prevail for the same commodity at the same time in an imperfect market, whereas in a perfect market same price rules throughout the market.

The following are the necessary conditions of a perfect market:—

(1) *Free and perfect Competition.* There should be no restrictions either on the buyers or on the sellers. They should be absolutely free to buy from or sell to any body they like. There should be no monopolies.

(2) *Cheap and efficient means of transport and communication.* Same price for the commodity will not rule if the information about changes in prices cannot be quickly transmitted or if the commodity cannot be cheaply and speedily transported.

(3) *Wide extent.* A perfect market is sometimes considered synonymous with a wide market. We have discussed above (see Section 3) the extent on which the extent of the market depends. In order to have a wide market, a commodity should be portable, durable, gradeable and should have a wide demand.

Let us now examine some cases and find out whether the market will be perfect or imperfect.

Market for invested capital (stocks and shares) is the nearest approach to the perfect market, since the stock exchange market is highly organised. "The methods of quoting shares, of making bargains and of settling transactions are absolutely fixed and widely known; prices are rapidly circulated and easily understood, while the high moral standard which exists throughout the market is far more efficient than the strictest legal control in preventing fraud and minimising risk" (Thomas).

Markets for precious metals, first-class bills of exchange, foreign currencies and important raw materials are also efficiently organised and may be regarded as perfect.

Markets for consumers' goods which are retail markets are less perfect. Prices differ appreciably in different localities. The retail markets are thus less perfect than the wholesale markets.

Producers' goods are, as a rule, purchased wholesale; the markets for them are more perfect. Labour market is mostly imperfect on account of the comparative immobility of labour, their weak bargaining power and the ignorance that generally prevails in labour circles. The market for real estate is relatively perfect, since buyers take a lot of trouble before they make a purchase. In the money market, the rate of interest varies according to the risk of default and the period of the loan. Money market may be regarded as imperfect, especially in India.

7. Market Categories under Imperfect or Monopolistic Competition further classified. One of the characteristics of imperfect competition is that the demand curve facing a firm is not perfectly elastic, *i.e.*, the firm has some control over its price policy. We may further distinguish between market categories under imperfect competition depending on the degree of control over price that a firm may be able to exercise :—

(*i*) Monopoly or simple monopoly means absence of substitutes for the product so that the monopolist in fixing his price is not bothered by the price policy of his rivals and thus he can fix his price independently of the price of other goods.

(*ii*) Duopoly refers to a situation where there are only two firms in a market competing against each other for the sale of either a standardised product or closely substitutable products.

(*iii*) Oligopoly implies a small number of sellers competing against one another, so that price-output policy of one seller will have significant effect on the price-output policies of the other firms. Hence in framing a price-output policy a firm cannot fail to take into account the possible reaction of the competitors.

(*iv*) Polypoly or monopolistic competition proper refers to a situation where there are a large number of firms selling closely substitutable brands of a commodity. In polypoly the influence of a firm on price-output policy is comparatively small—various brands being in close competition with one another. The chief distinction between polypoly and oligopoly is that in framing its price policy under polypoly, a firm can ignore the influence of its own policy on other firms and their reactions because if it reduces the prices, it will attract customers from a large number of firms so that for all practical purposes the fear of retaliation can be ignored.

8. Stock Exchange Organisation. Our stock exchanges are mostly organised on the basis of the London Stock Exchange. There are two classes of members : (*i*) jobbers, and (*ii*) brokers.

The jobbers do business on their own account, but cannot deal directly with the public. They must act through the brokers. The brokers, on the other hand, have to be brokers only. They cannot buy and sell on their own account. This specialisation is intended to minimize fraud.

The procedure for buying or selling shares is something like this. The would-be purchaser or seller of stock has to book the order with a firm of brokers who will then contact a jobber. Suppose Mr. A wants to buy certain shares. He instructs a stock broker to buy these shares for him. The stock broker goes into the stock exchange and contacts a jobber who is asked to quote. According to the rules of the stock exchange, the jobber must be always ready both to buy and to sell. He must be prepared to buy shares which he does not want, and sell the shares he has not got. The jobber, therefore, has to quote two prices : one price at which he will sell and the other at which he will buy. The difference between the selling and buying prices is the jobber's profit. It is called *jobber's turn*.

If the quotation is acceptable, the bargain is struck. Transactions relating to stocks and shares are cleared on certain days fixed for the purpose. These are called the settlement days. On the first day, it is ascertained whether the parties are in a position to carry out their part of the bargain. Suppose the purchaser is unable to pay for the shares he has contracted to buy. His broker will, then, ask the jobber to postpone the settlement to the next settlement day which generally comes after a fortnight. The jobber may agree to the postponement; but the buyer has to pay interest on the amount which he had to pay and which he now promises to pay at the next settlement time. This payment is called *contango.*

But if the buyer is ready with the purchase price, whereas the jobber has not been able to procure the shares he has agreed to sell, the jobber will ask for a postponement. He will, however, have to pay for it, because the purchaser loses some dividend on account of the delay in the delivery of the shares. The penalty that the seller has to pay for not being able to give the delivery of the shares is called *backwardation.*

In case the parties are willing and able to carry out the contract, then the next two days called the "Intermediate or Ticket days" are devoted to the completion of certain formalities. The particulars of the purchaser are passed on to the seller so that the shares may be formally transferred to his name. The fourth and the final day is devoted to the payment of cash and the delivery of the shares.

9. Advantages of Stock Exchange. Several advantages flow from the stock exchange organisation :

(1) It provides market for the invested capital. The stocks and shares are satisfactorily graded and can be readily sold or realised. It is through the stock exchange that a shareholder can realise cash for his shares at the time of need.

(2) High standard of business morality and the great confidence that the stock exchange organisation inspires among the investing public are instrumental in attracting new capital to trade and industry. In the absence of ready realisability of invested capital, new capital will not be encouraged to flow into industrial and commercial enterprises.

(3) Easy and cheap transactions in stocks and shares, rendered possible in the stock exchanges, facilitate the transfer and rearrangement of capital.

(4) 'True value' of securities is settled in the stock exchanges. The dealers are experts and are in a position to form a correct estimate of the true worth of a stock, which depends on its yield. No doubt sometimes the speculators on the stock exchange artificially raise the price of a security and sometimes depress it unduly, but these divergences are only temporary. Sooner or later, the price will get settled at its 'true value'.

10. Produce Exchange. Just as there are stock exchanges for the purchase and sale of stocks and shares, similarly there are produce exchanges in which speculation (*satta*) is carried on in staple commodities like wheat, gram, cotton, jute, etc. These produce exchanges are called by different names like " Grain Merchants' Association ", " Company," or " Chambers ". Only members can enter into transactions which the Association will recognise. The Association maintains a list of firms with which a member can enter into a transaction. Only men of property are eligible to become members. The admission fees are very high.

The quantity for which a transaction is permitted is not to be less than a *kotha* (500 maunds). A member has to maintain a margin of Rs. 100 per *kotha*. The margin is never to fall below Rs. 100. In case it does, the Association will either cancel a transaction or settle it before the margin becomes insufficient to cover the loss.

The transactions are of two types : (*i*) Spot (*hazir mal*) *i.e.*, when the transaction has to be completed forthwith; (*ii*) Forward transactions, *i.e.*, when transaction is entered into at the present price but delivery or settlement is to be made at an agreed future date.

The transactions are according to Indian months, *e.g. Baisakh, Jeth, Har, Bhadon, Asuj, Maghar, Magh,* etc. It is the seller's privilege, during the first 15 days, to ask the buyer to take the delivery and during the later 15 days the buyer can demand delivery. On the last day of the month, either the buyer can demand delivery or the seller can give notice of delivery. For example, if it is a *Jeth-Har* transaction, then on any day between 16th *Jeth* and end of *Jeth* the seller can ask the delivery to be taken. The buyer can demand delivery at any time between 1st of *Har* and 14th of *Har*. On the 15th of *Har*, which is the last day of the month, for which the bargain was made, either the seller or the buyer may demand respectively to make or take delivery.

If the buyer does not take the delivery when called upon to do so, or the seller does not make the delivery, then the company completes the bargain. Loss, if any, is put to the account of the defaulter. When the buyer demands delivery, he has to deposit 25 per cent of the value of the goods with the company and the seller can receive the value from the company when he has made the delivery.

In case either party is unable to complete the transaction, he is allowed to continue it at a new price which is more favourable to the other party. But the old amount must be settled and closed by the payment of the difference to the party which has gained by the change in price, *e.g.*, the buyer must pay the difference if the price has fallen.

11. Speculation. Transactions in the various markets take place not only for genuine buying and selling but also for purposes of speculation. In speculation, commodities are nominally purchased and sold by dealers simply to take advantage of anticipated differences in prices over a period of time. When a transaction is made at the present price but settlement is to be made at some future agreed date with the sole object of making a profit from the fluctuation of prices, the transaction is called speculation.

Hence the essentials of speculation are : (*a*) The transaction is made at the *current price* ; (*b*) the settlement is to be made at some *future date* ; and (*c*) it is done *solely with a view to making profit*. The delivery is neither given nor taken; only the difference is paid or received. Speculation is also known as dealing in futures or simply futures. A commodity having a wide demand and which can be suitably graded and whose price is fluctuating lends itself to speculation.

Speculation is of two types:

(*i*) *Legitimate Speculation.* This type of speculation covers the activities of those speculators who are experts in their business. They proceed in their business in a scientific manner. They try to forecast demand and to estimate the future supplies. For this purpose, they make use of all the statistical information available. They put together all relevant facts and figures and estimate the course of future prices. It is on the basis of such scientific and careful calculations that they enter into a transaction. This is speculation proper.

(*ii*) *Illegitimate Speculation.* This is sheer gambling. There are a large number of people who are ignorant of the forces operating on demand or supply side. They enter into a bargain blindly and without due deliberation. These unscrupulous operators deliberately manipulate the market. Their judgment is more often wrong than right. It is betting pure and simple. They run the risk of considerable loss and often ruin themselves.

The only difference between legitimate and illegitimate speculation is that the former refers to the activities of experts and the latter to those of the host of blind followers of these experts. The nature of the transaction is the same. If it is done by experts it is legitimate, otherwise it is illegitimate.

Speculation has also been classified as *competitive speculation* and *monopolistic speculation*. In the former case, no speculator thinks himself strong enough to influence or control price. Monopolistic speculator, on the other hand, deliberately seeks to bring about price changes by using his vast financial resources in bulk transactions. Such speculators accentuate price fluctuations instead of smoothing them. By interfering thus with the free operation of competitive economy, they distort it and prevent an optimum distribution of the resources of the community.

Certain terms are commonly used in speculation. Those who buy stocks and shares in the expectation that prices will go up are known as *Bulls*. Those who sell in the present expecting prices to fall in the future are known as *Bears*. The market is 'bullish' or *tezi* when prices are rising. The market is 'bearish' or *mandi* when lower prices rule.[1]

Hedging. It is a device by which a producer or a manufacturer protects himself from the risk arising out of price fluctuations. He has to buy raw materials and stock them for months. If the price of the raw materials falls subsequent to his having purchased or stocked them, he would feel that he has incurred a loss. He is a manufacturer and not a dealer in raw material. He is prepared to take risk in his manufacturing activity but not arising out of the fluctuations in the price of raw materials. This he is anxious to eliminate. How can he do it ?

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[1] These terms originate from the fact that a bull throws its victim upwards and a bear pushes him down.

Take the case of a miller. He buys 20,000 maunds of wheat for milling purposes at Rs. 10 per maund. Later the price falls to Rs. 8. He has lost Rs. 2 per maund, *i.e.*, Rs. 40,000 in all. But if the price rises to Rs. 12 he shall have made a profit of Rs. 40,000. He wants to avoid this loss and will not mind if there is no profit either. He will resort to hedging. When he buys 20,000 maunds at Rs. 10 in the spot market, he sells the same quantity at this price in the forward market. Now suppose the price falls to Rs. 8 per maund. What is the result ? On the wheat he has purchased 'spot', he loses Rs. 40,000 but on the forward market he gains Rs. 40,000, for he will be able to get it at Rs. 8 whereas he has sold it at Rs. 10. Thus the loss in one transaction is exactly set off by the gain in the other, and, on the whole, he neither gains nor loses. This is exactly what he wanted. He does not want any profit or loss apart from his proper business of milling.

Options. The speculator purchases an option by means of which he can get out of a losing bargain. The options are of three types :—

(*i*) *Call Option*. Suppose I have purchased wheat at Rs. 10 per maund, but, when the settlement day comes, the price has fallen to Rs. 8. This means a loss of Rs. 2 per maund to me. But if I have purchased the call option, *i.e.*, the right to buy or not to buy, by paying one anna per maund, I shall exercise my option not to buy, and I lose only one anna per maund instead of Rs. 2.

(*ii*) *Put Option*. *i.e.*, option to sell or refuse to sell. Suppose I have undertaken to sell 5,000 maunds of wheat at Rs. 10 per maund. When the date arrives, the price in the market is Rs. 12. I lose Rs. 2 per maund, *i.e.*, Rs. 10,000 in all. But if I have purchased the ' put option ', I shall exercise the option and refuse to sell. By exercising the option I lose only the option money which is insignificant as compared with the total loss on the bargain.

(*iii*) *Double Option* (*Put and Call*). This option will give me the right either to buy or to sell, whatever is advantageous for me to do. But having purchased this double option I am not sure that I shall gain. It depends on what I have paid for the option and what is the extent of the change in price. If I have paid 4 as. per maund for the double option and the rise and fall in price is also 4 as. per maund, I neither gain nor lose. But if the rise or fall is more than this, I shall gain by exercising my right to buy or to sell. In case, however, the rise or fall in the price is less than the price of the double option, I shall lose whichever way I may exercise my option.

12. Benefits and Dangers of Speculation. Speculation proper plays a very essential and useful role in modern business. It helps in making prices steady, by equalising the forces of supply and demand over a period of time. Suppose the present price of cotton is Rs. 10 per maund and a clever speculator comes to the conclusion that the price will rise to Rs. 18. He will proceed to purchase as much cotton as he can. Many other speculators will also do the same. This will enhance the demand for cotton just then and will raise its price.

Immediately the price may rise from Rs. 10 to Rs. 13 per maund. But the speculators have purchased large quantities of stock to sell it later. This increases the supply of the commodity at a time when shortage is feared. Hence the price will not rise as much as anticipated. It may settle at Rs. 15 a maund instead of the anticipated Rs. 18 per maund. This means that on account of speculation the difference in the price of cotton has been reduced from Rs. 8 (Rs. 18—Rs. 10) to Rs. 2 (Rs. 15—Rs. 13) only.

The activities of the expert speculators thus tend to eliminate violent fluctuations in prices. If prices were expected to rise in the absence of speculation, they now rise less. And in case they were expected to fall, they fall less. Speculation thus has steadying effect on prices. Speculators bring about a better adjustment between demand and supply.

Violent fluctuations of prices are socially harmful. They have a disturbing effect on economic life. They create an atmosphere of uncertainty which acts at the very root of the industrial and commerical enterprise. The activities of the speculators result in eliminating these violent price fluctuations and render a great service to the community.

The steady prices are useful to (*i*) the consumers, (*ii*) the producers, and (*iii*) the community in general.

(*i*) The *consumer* benefits, for when the prices are steady, he is better able to map out his expenditure. Violent price movements upset his family budget and impart an element uncertainty to the domestic economy. If prices are steady his calculations are facilitated. The speculator is thus helping the consumer by making the prices steady.

(*ii*) The *producer* also gains from the activities of the speculators. It is characteristic of the modern industrial system that production has to be initiated long in advance of demand. Violent fluctuations in the prices of the raw material will seriously upset all the calculations of the producer. The speculator intervenes to eliminate this risk. He makes the course of prices steadier and relieves the producer of severe headache on account of price changes. We have already seen in the discussion on hedging how the manufacturer is enabled to eliminate extraneous risks.

(*iii*) Speculation is beneficial to the *community* in general because the speculators, by their activities, draw the attention of the community to the anticipated scarcity or abundance of a commodity. If it is going to be scarce, we must start economising forthwith ; and if it is going to be abundant, keeping large stocks will be unnecessary, uneconomical and risky.

(*iv*) The speculators help in the economic distribution of a commodity. They are experts and know therefore not only *when* the prices are going to rise or fall, but also *where* they are high or low. The commodity tends to move to a place where prices are expected to be high. " The speculator does not add to existing supplies, nor does he subtract from them, but these activities result in a better adjustment of supply to demand as between the present and the future," and, we may add, between one place and another.

(*v*) Speculation in stock exchange, by facilitating stock exchange transactions, promotes capital formation and serves as a guide to the investor. It helps in the raising of fresh capital.

It is well known how the feverish activities of the speculators in New York in 1929 brought about a crash in the Wall Street (New York Exchange). Prices of stocks were artificially raised to figures out of all proportion to their yield, actual or prospective. The volume of monthly sales on the New York Stock Exchange increased from 18 million shares to 100 million shares. The speculative boom had an inevitable crash. Hundreds and thousands of American speculators were ruined. Soon the rest of the world also found itself in the grip of a grave crisis.. The Great Depression followed in its wake. In the words of Arthur Salter, "Speculation based on economic realities may be beneficial but 'speculation on speculation' is definitely injurious.[1]

Speculation has been described as the salt of industrial and commerical activity. Accepting the gastronomic comparison as true, says an Indian writer, it may still happen that the same palate may reject equally food without salt as also food which contains too much salt. Thus speculation is good but too much speculation is bad. When speculation becomes an end in itself. it is dangerous. " When this happens and the hope of gain is more and more isolated from productive activity and comes to rest exclusively on the game of probability of a rise or fall of prices, the hope of the profit arising from the differences between the purchase and the sale price........there is a transference of activity from the field of work to that of play, from the factory to the stock exchange, from the field of production to that of distribution or redistribution of wealth, and thus the easy enrichment of one at the expense of another comes to mean a transfer of wealth from the one to the other without any increase in the amount of wealth which must, in the end. impoverish the country."[2]

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[1] See Brij Narain — *Principles of Economics* (1945), p. 83.
[2] *Ibid.* pp. 83-4.

CHAPTER XVII

COST CURVES AND SUPPLY CURVES

1. Introduction. Valuation is the central problem of Economics. Two sets of forces (supply and demand) determine value. So far we have been studying demand. Before we come to the equilibrium of demand and supply, we shall briefly discuss supply.

2. Supply and Stock. *Supply means the amount offered for sale at a given price.* "We may define supply as a schedule of the amount of a good that would be offered for sale at all possible prices at any one instant of time, or during any one period of time, for example, a day, a week, and so on, in which the conditions of supply remain the same." (Meyers).

Supply should be carefully distinguished from stock. *Stock is the total volume of a commodity which can be brought into the market for sale at a short notice* and supply means the quantity which is *actually brought* in the market. For perishable commodities, like fish and fruits, supply and stock are the same because whatever is in stock must be disposed off. The commodities, which are not so perishable, can be held back if prices are not favourable. If the price is high, larger quantities are offered by the sellers from their stock. And if the price is low, only small quantities are brought out for sale. In short, *stock is potential supply.*

3. Cost of Production. An industry consists of all those firms which are producing the same product. The market supply curve is the sum of outputs offered for sale at various prices by all the firms in an industry. To derive the market supply curves, we have to go, first, to get the individual supply curves of firms. This brings us to a study of the nature of costs of production of a firm. The cost may be nominal cost or real cost. *Nominal* cost is the *money* cost of production. It is also called *expenses of production.* Attempts were made to " pierce the monetary veil " and to establish cost on a *real* basis. *The real cost of production* has been variously interpreted. Adam Smith regarded pains and sacrifices of labour as real cost. Marshall includes under it "real cost of efforts of various qualities" and "real cost of waiting"[1]. This is called the social cost by Marshall. The Austrian school of economists and their followers have given a new concept of real costs. According to them, the real cost of production of a given commodity is the *next best alternative sacrificed in order to obtain that commodity.* It is also called *opportunity cost* or *displacement cost.*

For the moment, we shall use the term cost of production in the sense of *money cost or expenses of production.* This is entrepreneur's cost. We shall analyse the entrepreneur's cost of production and then see in what manner such costs influence prices. Later on, from these monetary costs, we shall go to more fundamental forces determining value.

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[1] Marshall, A.—*Principles of Economics* (8th Ed.), p. 350.

The *entrepreneur's cost of production includes* the following elements[1] : (*i*) *Wages* of labour ; (*ii*) *interest* on capital ; (*iii*) *rent* or *royalties* paid to the owners of land or other property used; (*iv*) *cost of raw materials* ; (*v*) *replacement and repairing charges* of machinery ; and (*vi*) *profits* of the manufacturer sufficient to induce him to carry on the production of the commodity. Costs may be classified as—(1) production costs, including material costs, wage costs, interest costs, etc., *i.e.*, both direct and indirect costs ; (2) selling costs, including costs of advertising ; and (3) other costs, including insurance charges, rates, taxes, etc.

4. Prime (Variable) and Supplementary (Fixed) Costs. The cost of production for the entrepreneur may be analysed from another point of view. *Some costs vary more or less proportionately with the output, while others are fixed and do not vary with the output in the same way. The former are known as prime costs and the latter as supplementary costs of production or overhead costs.* They must be paid even though production has been stopped temporarily. These are supplementary costs and include rent of the factory building, interest on capital invested in machinery, and salaries of the permanently employed staff. The prime costs, on the other hand, are variable costs. They vary with the output. These costs include the cost of raw materials used in the making of the commodity as well as the costs of casual or daily labour employed. They are incurred only when the factory is at work.

The distinction between Prime (variable) and Supplementary (fixed) costs applies only to a short period. Nothing can remain fixed for a long time. In the long run, the staff would change, amount of capital invested would be different, the dimensions of the factory too may change, and so on. Hence " in the very long run, all costs are variable or prime"[2].

5. Total Average and Marginal Costs. Study the following Table :

Costs of Production of a Firm

Units of output	Total fixed cost	Total variable cost	Total cost 2+3	Average fixed cost 2÷1	Average variable cost 3÷1	Average cost 5+6	Marginal cost
1	2	3	4	5	6	7	8
0	30	0	30	—	0	—	—
1	30	10	40	30	10	40	10
2	30	18	48	15	9	24	8
3	30	24	54	10	8	18	6
4	30	32	62	7.5	8	15.5	8
5	30	50	80	6	10	16	18
6	30	72	102	5	12	17	22

Total cost of a given output is the sum of total fixed cost and total variable cost. As far as the total fixed cost is concerned, it remains constant for all units of output, but we have to incur more variable costs, when output increases. Total variable cost is zero when output is zero and it increases with an increase in output though the rate of increase is not constant. At first it increases rapidly but, then, due to economies of larger production it does not increase as fast as before though it jumps up rapidly at a later stage (when output increases from 4 units to 5 units) due to diseconomies that set in.

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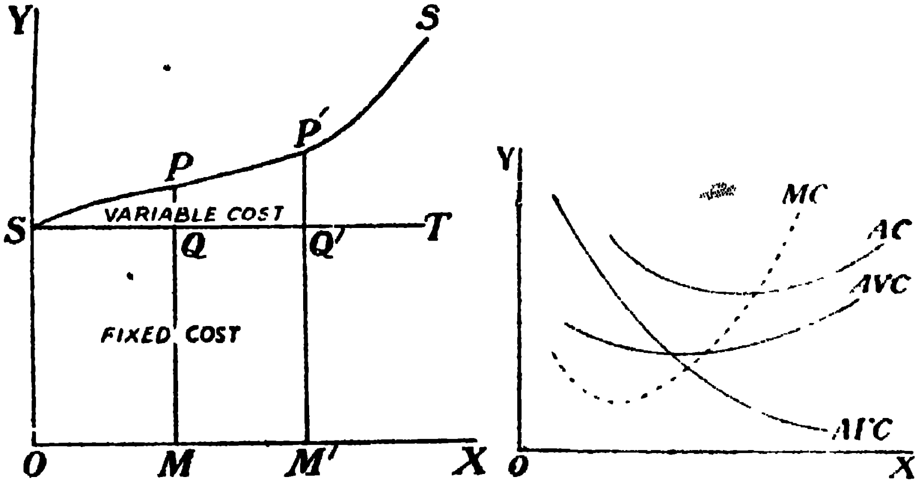
[1] For details *see* Meade—*Economic Analysis and Policy*, pp. 2-5.

[2] Benham—*Economics*, 1940, p. 181.

In figure (*i*) SS is the total cost curve and it includes the total fixed cost (the distance between the curve ST and X-axis) and the total variable cost (represented by the distances between the curves SS and ST)



(*i*) Total Cost.

(*ii*) Average and Marginal Costs.

Fig. 29.

Average cost per unit is the total cost divided by the number of units produced. It is the sum of average fixed cost and the average variable cost. In figure (*ii*), we have drawn both the average fixed cost curve and the average variable cost curve. Total fixed cost being fixed for all units of output, average fixed cost is a falling curve in the shape of a rectangular hyperbola. Average variable cost curve (AVC) at first falls and then rises as there emerge the diseconomies of larger production. By adding the two costs, we get the average cost curve (AC) per unit of output. At first average cost is high due to large fixed cost and small output. As output increases the fixed cost is thinly spread over the large number of units produced, and the average cost accordingly falls. This is due to the various internal economies and the use of indivisible factors. But when diminishing returns set in due to difficulties of management and limitations of plants and space, the variable costs and therefore the average costs, start increasing. The lower end of the curve turns up and gives it a U-shape. That is why *average cost curves are U-shaped.*

Marginal cost is the addition to total cost caused by a small increment in output. Marginal cost curve (MC) in figure (*ii*) also falls at first due to more efficient use of variable factors as output increases and then it slopes upward as further additions to output interfere with the most efficient use of variable factors.

It can be seen that the average variable cost continues to decline so long as the marginal cost is below it, but it starts rising at the point where MC crosses AVC. The marginal cost will always rise more sharply than the average variable cost. Similar relation holds between marginal cost and average cost.

Among the factors which affect costs may be mentioned (*i*) the level of output ; (*ii*) changes in the prices paid for productive services (factors of production) ; (*iii*) improvement in the technique of production ; and (*iv*) changes in the size of plant and equipment. In the last case, the new ATC (average total cost) curve will at first, when the output is small, be above the old ATC curve, but when output is sufficiently expanded the new curve will be below the old one.

It should be remembered that an increase in variable costs will increase marginal cost and average total cost. But increase in fixed cost will increase the average total cost but not the marginal cost. Since marginal cost means an addition to the total cost caused by the production of one additional unit, it would be unfair to burden this additional unit with the increases in salaries, rent or interests, etc. (*i.e.*, fixed costs). Increase in these items is obviously not due to the production of the additional unit.

6. Deriving Marginal and Average Cost Curves from Total Cost Curve. In figure 30, SS is the total cost curve. To get the average and marginal cost for a given point on the total cost curve we proceed as follows :

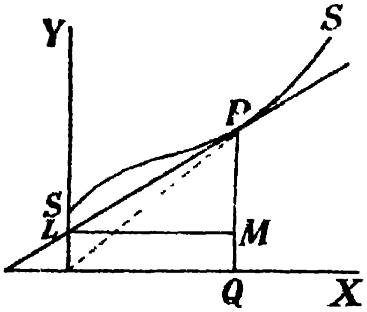


Fig. 30.

Draw a straight line from P to the origin O. Then average cost at the point P equals the value of tangent of the angle (POX) that the st. line makes with the X-axis. In this figure it is equal to PQ/OQ. Similarly we can know the corresponding average costs at different points of the total cost curve. By joining all these points we get a U-shaped average curve (Fig. 31).

To know the marginal cost the point P we draw a tangent to the curve SS at the point P. Then marginal cost corresponding to the total cost at P is given by the value of the tangent of the angle that RP makes with the X-axis. In this case it is equal to the value of the tangent of angle PRQ and this equals PQ/RQ or which is the same thing PM/LM.

Similarly we can know the marginal cost at different points of the total cost curve and by joining them we get the marginal cost curve. (MC in figure 31).

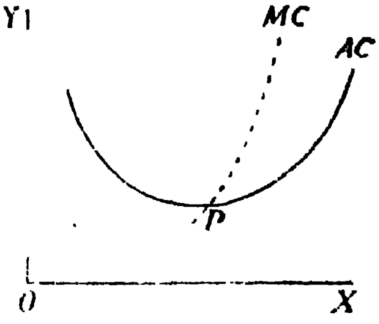
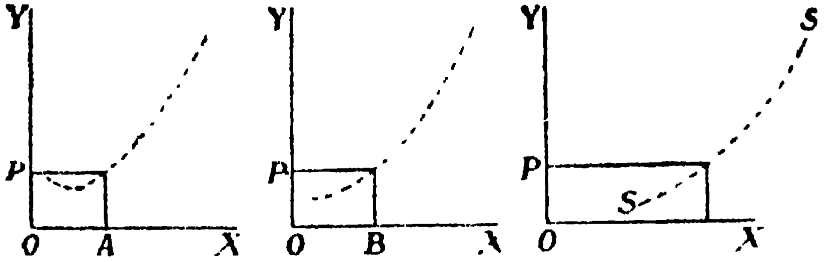


Fig. 31.

Relation between *Average Cost and Marginal Cost* ; It will be obvious from a study of the arithmetical table given at the beginning of this Chapter that when average cost is falling, marginal cost must be below it and that when average cost is rising, marginal cost must be above it. At the point where the

average cost curve is neither rising nor falling, *i.e.*, it is at minimum point, marginal cost intersects it and at that point (P in Fig. 31), average cost is equal to the marginal cost.

7. The Industry Supply Curve and the Law of Supply. We are now in a position to draw the market supply curve from the cost curves of the individual firms.



Firm A **Firm B** **Industry Supply Curve**

Fig. 32.

Under perfect competition price equals marginal cost of production to a firm. Price being given to the firms, they produce to the point where the horizontal price line intersects the marginal cost curves. If there are only two firms in the industry then at the price OP the output of the industry is OA+OB. By varying the price and finding the corresponding outputs of the firms at those prices, we get the industry supply curve.

Supply has functional relationship with price. "*Other things remaining the same, as the price of a commodity rises its supply is extended, and as the price falls its supply is contracted*". The quantity offered for sale varies directly with price, *i.e.*, the higher the price the larger is the supply, and *vice versa*.

Corresponding to the demand schedule already explained (Chap. VI. Sec. 2), we can construct an individual's supply schedule. Also by totalling up the amount supplied at various prices by all the sellers in a market, we can obtain the supply schedule of the market. Supply schedule represents the relation between prices and the quantities that people are willing to produce and sell.

Suppose the following is the (market) supply schedule of apples :

Price per dozen. Rs.	Quantity supplied in dozens.
7	43
6	40
5	36
4	31
3	25
2	18
1	10

It will be seen that when the price is as high as Rs. 7 per dozen, as many as 43 dozen apples are offered for sale. As the price falls, the amount supplied decreases. When the price is as low as Re.1 a dozen, only 10 dozen apples are offered for sale. This means that *as price falls supply is contracted, and as price rises supply is extended*. This is the Law of Supply.

The supply schedule given above can be represented in the form of a Supply Curve.

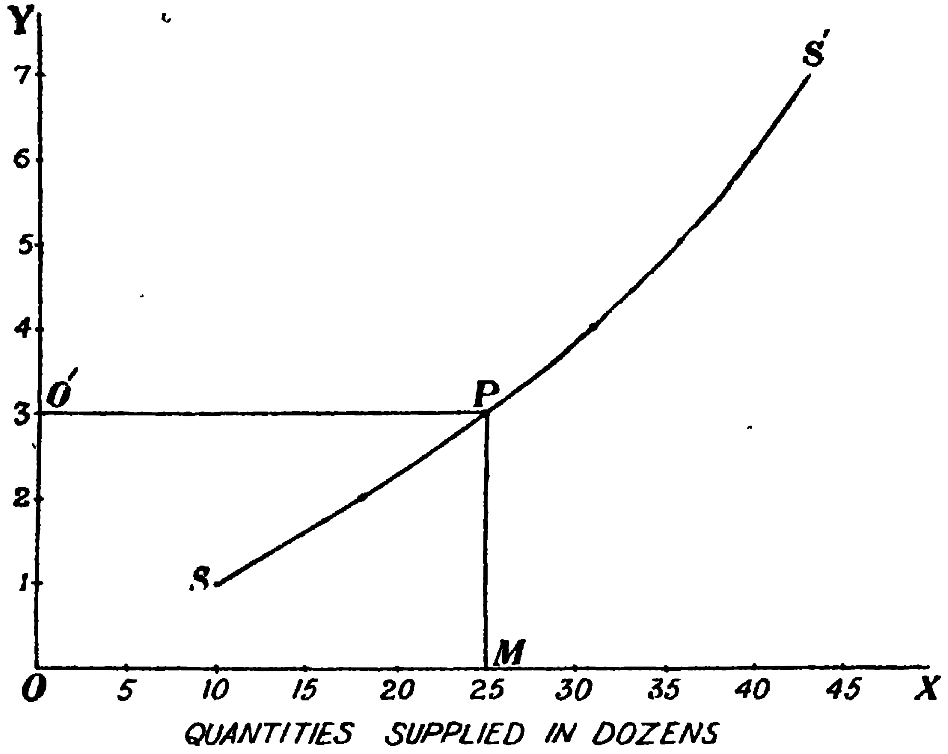


Fig. 33.

Quantities supplied are measured along OX, and prices along OY ; SS′ is the supply curve. If from any point P on the supply curve, PM is drawn perpendicular to OX and PO′ to OY, then at PM(=O′O) price, PO′ (=OM) quantity will be supplied.

It should be noted that the supply curve slopes from right to left, as contrasted with the demand curve, which slopes from left to right. The reason is that when price falls demand is extended, but supply is contracted; and conversely when price rises, demand is contracted, but supply is extended.

If the price falls too much, supply may dry up altogether. The price below which the seller will refuse to sell is called the reserve *price.* At this price, the seller buys his own stock as it were.

There are several factors which govern the reserve price of a seller :

(1) The reserve price will depend on the perishability of goods. The greater the perishability, the lower is the reserve price.

(2) In case of goods which are not perishable, the reserve price will depend upon the seller's estimate of the future price.

(3) It will also depend upon the future costs. If the costs are expected to fall, the reserve price will be lower, and *vice versa.*

(4) The reserve price also depends on the charges which have to be incurred for carrying stocks. The period for which the stocks have to be held is therefore important. The longer is this period the lower will be the reserve price.

(5) The seller's liquidity preference is another determining factor. The more urgent is his need for cash, the lower will be the reserve price.

(6) Some obstinate dealers attach too much importance to costs incurred in the past and fix a high reserve price even though it may land them in greater loss.

8. Elasticity of Supply. When a small fall in price leads to great contraction in supply, the supply is comparatively elastic. But when a big fall in price leads to a very small contraction in supply, the supply is said to be comparatively inelastic. Conversely, a small rise in price leading to a big extension in supply shows elastic supply, and a big rise in price leading to a small extension in supply indicates inelastic supply.

The elasticity of supply is really the measure of the ease with which an industry can be expanded and the behaviour of the marginal costs. If a slight increase in price is followed by the entry of many new firms having minimum average cost equal to price and the marginal cost does not rise, the supply is said to be perfectly elastic. In case, however, the increased output can be obtained only by an infinite increase in price and no new firm is attracted to the industry, the supply will be inelastic. In between these two extremes, there will be different degrees of elasticity. The degree of elasticity will depend, in a particular case, on the slope of the marginal cost curve and the shape of the average cost curves of the successive firms.

''The relation between a price and the quantity supplied is rather like the relation between a whistle and a dog--the louder the whistle, the faster comes the dog ; raise the price and the quantity supplied increases. If the dog is responsive—in economic terminology elastic—quite a small crescendo in the whistle will send him bounding along. If the dog is unresponsive or 'inelastic', we may have to whistle very loudly before he comes along at all''.[1]

A vertical straight line will represent absolutely inelastic supply (zero elasticity) and a horizontal straight line an infinitely elastic supply. In between these two extremes, there will be varying degrees of elasticity. The following formula is general measure of elasticity :

$$\text{Elasticity of supply} = \frac{\text{Increase in amount supplied}}{\text{Amount supplied}} \div \frac{\text{Increase in Price}}{\text{Price}}$$

The following digrammatic method is adopted for the measurement of the elasticity of supply :

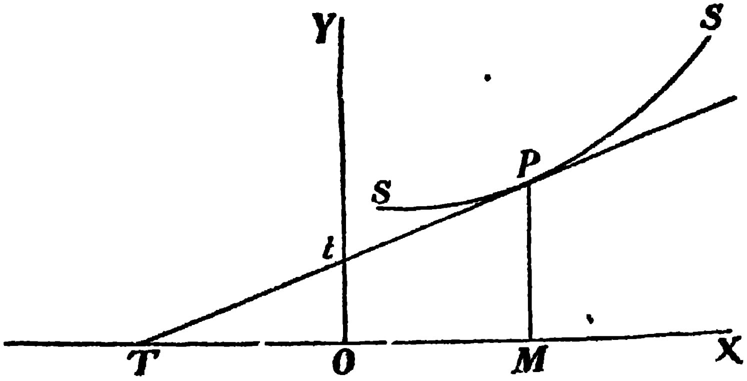


Fig. 34.

SS' is the supply curve. Take any point P on it. Through P draw a tangent PT touching X-axis at T. Again from P draw PM perpendicular to X-axis at M. Then

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[1] Boulding—*Economic Analysis*. 1949, p. 128.

$$\text{Elasticity of supply} = \frac{PT}{Pt} = \frac{MT}{OM}$$

9. Increase and Decrease in Supply. Economists usually say that, other things being equal, there is a unique demand and supply schedule at any given moment. But other things seldom remain the same. Hence a change in supply and demand.

Supply is said to increase when at the same price more is offered for sale or the same quantity is offered at a lower price. The supply is said to decrease, when at the same price less is offered for sale or the same quantity is offered at a higher price. This is illustrated by the accompanying diagram.

If SS is the supply curve before the change, $S'S'$ shows a decrease in supply because at the same price $PM\ (= P'M')$ less is offered for sale *i.e.*, OM' instead of OM. $S''S''$ shows an increase in supply because at the same price $PM\ (= P''M'')$ more is offered for sale, *i.e.*, OM'' instead of OM.

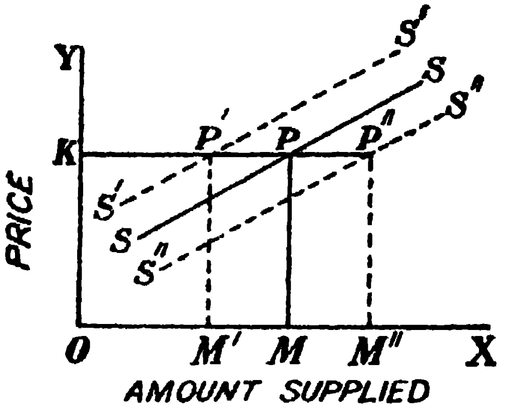

Fig. 35.

The student should carefully distinguish between the increase in quantity supplied (also known as extension of supply) and an increase in supply. Increase in supply means that the whole supply curve has shifted to a new position to the right. It is a new curve altogether, whereas increase in the quantity supplied simply means that more is being offered at a higher price. The supply curve is the same. A movement along the same curve simply indicates changes in quantities offered as a result of a change in price. It does not represent any change in the supply schedule or conditions of supply.

From the point of view of the time taken by the forces of supply to adjust themselves to changes in price, we may distinguish between three types of supply :

(*i*) *Market supply.* It is instantaneous supply and no time is given for supply to adjust itself to a change in demand. There is no minimum below which the sellers will not sell. Given the demand, the price will depend solely on the eagerness of the seller to sell the whole or part of his stock.

(*ii*) *Short period supply.* It refers to supply which can be put up with the existing factors of production. Time is not enough for expansion or contraction of industry as the need may be.

(*iii*) *Long-period supply.* In this case, there is sufficient time for expansion or contraction of industry. There is time for the manufacture of *new* plant and equipment to replace the old ones or to add to the existing plant capacity of the industry if need be.

10. Causes of Changes in Supply. The increase and decrease in supply may take place on account of a number of factors.

In the first place, cost of production of a commodity may rise due to increase in the *prices of the various factors of production*, like raw materials and intermediate products, used in its production. This will result in a decrease in supply. Conversely, fall in the prices of such factors will lead to greater production and consequently an increase in supply.

Secondly, as regards agricultural commodities, better rainfall, improvement in *irrigation, more supply manure* and *better methods of production* naturally would increase supply. On the contrary, failure of *rains, floods, fires, dust-storms, pests, earthquakes*, etc., will decrease the supply. Food supply increased in India under the stimulus of the grow-more-food drive.

Thirdly, improvement in technique lowers cost of production and will increase supply. On the other hand, higher taxation imposed on the output of a commodity or on the factors required for its production will decrease the supply.

Fourthly, improvement in the means of communication and transport may increase the supply of particular commodities if imports from foreign countries are encouraged. It may, however, reduce the supply if exports are facilitated.

Fifthly, political disturbances or a war may disorganise or divert channels of trade and thus create scarcity of certain kinds of goods.

Sixthly, supply may be consciously decreased by *agreement among the producers*. Part of the supply may be destroyed in order to raise prices. During the Great Depression the production of rubber, tea and some other commodities was restricted through international agreements among the producers. Coffee was thrown into the sea in Brazil.

Finally taxation on output, sales, imports etc., also affects the supply. By levying high import duties, a government may restrict the supply of a foreign commodity to encourage its production at home. Government may restrict production of certain articles for reasons of health (*e.g.*, opium in India).

Factors affecting both Demand and Supply. We have studied the factors which affect demand alone or supply alone. But there are certain factors which affect both demand and supply simultaneously.

(*i*) *Change in money incomes.* When there is inflation, there is an increase in money incomes. Demand increases and prices rise. Supply will increase to take advantage of the rise in prices. When there is decrease in the amount of money, (deflation) prices fall thereby increasing demand but decreasing supply.

(*ii*) *Improvement in technique.* When there is an improvement in technique, volume of production increases and supply is increased. Things become cheap, and consequently real income increases. But we have already seen that a change in real income makes a change in demand also.

(*iii*) *Wage-induced inflation or deflation.* If wages increase, the purchasing power of the workers increases, which means an increase in demand. But increase in wages affects supply through its influence on costs of production.

(*iv*) Changes in tastes and preferences of the buyers and also in incomes of buyers and sellers will affect demand and supply.

(*v*) *Size and distribution of social or national wealth.* When wealth is more evenly distributed, some people become less rich and others less poor. Their relative purchasing powers are affected which in turn affect demand. It will call forth changes in supply in response to these changes in demand.

11. A peculiar Supply Curve. The ordinary law of supply states that more will be supplied at higher price. But it sometimes happens that up to a point this law holds good and after that it starts working in a reverse direction which means that less will be offered at a higher price. A familiar illustration of this can be found in the case of labour. Rising wages induce more work, but after a point leisure is preferred to labour. Higher earnings enable workers to have a holiday. Rising wages have led to a progressive reduction in the working hours.

Another illustration is offered by the effect on savings of a rise in the rate of interest. Ordinarily a higher rate stimulates saving. But there are people who are intent on saving a fixed amount. They will save less as interest rate goes up.

Such cases are represented by a backward bending of supply curve as under :—

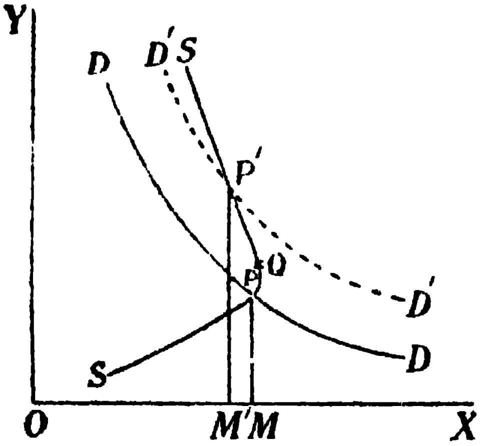

Fig. 36.

DD is is the original demand curve and D'D' (dotted curve) is the new demand curve representing an increase in demand. SS is the supply curve. Up to the point Q, a higher price attracts greater supply, but beyond that it is the opposite. P' is a point on the increased demand, and the price has gone up from PM to P'M' but the supply has decreased from OM to OM'.

CHAPTER XVIII

PRICING UNDER PERFECT COMPETITION IN THE SHORT RUN

1. Equilibrium. Modern Economics is sometimes called equilibrium analysis. Equilibrium means a state of balance. When forces acting in opposite directions are exactly equal, the object on which they are acting is said to be in a state of equilibrium. Tie a chord to a pièce of stone and dangle it in the air. After oscillating from side to side, the stone will come to rest, if no further disturbance is caused. The stone is then in a state of equilibrium. This particular type of equilibrium is called *stable equilibrium,* for the object concerned, after having been disturbed, tends to resume its original position. When a slight disturbance evokes further disturbance, so that the original position is never restored, it is called *unstable equilibrium.* It is *neutral equilibrium* when the disturbing forces neither bring it back to the original position nor do they drive it further away from it. It rests where it has been moved. Pigou thus describes these three equilibria : A ship with a heavy keel is in stable equilibrium ; an egg lying on its side is in neutral equilibrium, an egg poised on one of its ends is in unstable equilibrium. The equilibrium is partial when it is based on limited data but it is general when it is based on full data.

The static economic theory seeks to explain the equilibrium position on the assumption that the governing data remain unaltered for a run of time. These data are size and composition of the population, incomes and tastes of the people, the state of technical knowledge, resources, etc. The economic conditions either do not change or they change in a recurrent cycle. The dynamic Economics does not study the equilibrium position but the path traversed by the economic forces before they reach the final position. As Robbins says, " We study the laws of rest (*i.e.*, static Economics) in order to understand the laws of change in dynamic Economics."

2. Equilibrium of Supply and Demand. The idea of equilibrium has been applied to supply and demand. These are two sets of forces tending in the opposite directions. Larger supply tends to lower price, greater demand tends to raise price. When the pressure of these two forces is equal in the opposite directions they tend to maintain a certain price which is called the equilibrium price.

The table given below combines the supply and demand schedules relating to apples and shows how equilibrium takes place between these two sets of forces.

Price per dozen	Quantity demanded. (Dozens)	Quantity supplied. (Dozens)
7	4	40
6	7	33
5	12	29
4	15	26
3	23	23
—	—	—
2	29	16
1	38	10

It will be seen that when price is Rs. 3 per dozen, 23 dozens are supplied and 23 dozens are demanded ; the supply is equal to demand ; Rs. 3, therefore, is the *equilibrium price*. Any disturbance of this price will set forces into operation which will tend to bring it back. For instance, if price rises to Rs. 4, supply (26 dozens) will be more than demand (15 dozens). Competition among the sellers to capture the limited demand will push price down to the equilibrium level. If price falls to Rs. 2, demand (29) will be greater than supply (16), and competition among the purchasers for a limited supply will force up the price to the equilibrium level. Rs. 3 thus is the equilibrium price ; the quantity of 23 dozens is called the *equilibrium amount* which is bought (and sold) at the equilibrium price.

The following diagram illustrates the same thing. The supply and demand curves represented by the above schedule are brought together.

The two curves cut each other at P which is thus a point on both the curves. PM is drawn perpendicular to OX and PO′ to OY, PM (=OO′=Rs. 3) is the equilibrium price.

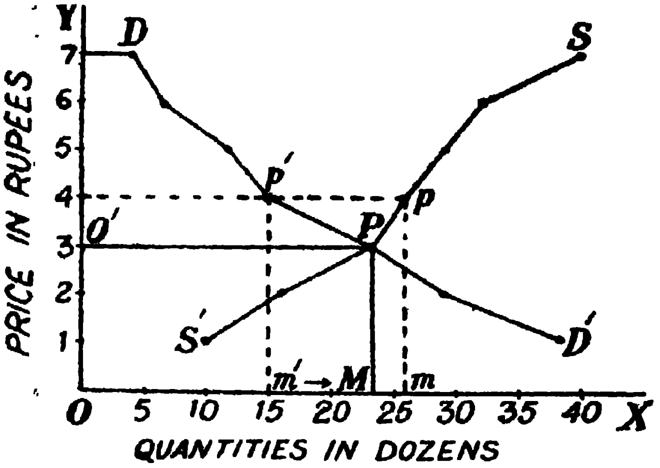

Fig. 37

If price rises to *p′m′* (Rs. 4) per dozen demand *Om′* (=15) will be less than supply O*m* (=26) at the new price. Price will be pushed down to PM (=Rs. 3), the equilibrium level. The opposite will happen if price falls to Rs. 2 when the demand will be greater than supply at this price. Competition among the buyers will push it up to Rs. 3, the equilibrium price.

Functions of Price Mechanism.

It is clear that the market price performs two very important functions in the economic system :

(*i*) It rations out the existing supply among all intending buyers, so that all who are willing to pay this price are enabled to buy ; and

(*ii*) It allocates the limited supplies over a period of time. How the market price performs these functions economically, efficiently and impersonally is obvious from the inconvenient, costly and inefficient system of rationing.

3. Equilibrium—Short Term and the Long Term, the Firm and Industry. In the theory of value, we speak of a firm being in equilibrium position if its total profits are the maximum. The total profits being the maximum means that the firm does not wish either to expand or contract its output and any divergence from this position would set in motion forces to bring it back to the original level. If output is below the equilibrium point then profits can be increased by adding to output to the equilibrium point and if output is beyond the equilibrium point, the firm can increase its profits by contracting its output.

For an industry, a state of equilibrium implies a situation when there is no incentive for the price and output of the industry to change. Such a state would exist if there is no incentive for existing firms to change their output or for the new firms to enter the industry.

The state of equilibrium may refer to a short period or a long period situation. In a short period, we assume that the stock of productive capacity (plant size) is fixed. The period is so short that new firms cannot enter the industry to take advantage of a possibly advantageous situation nor can the existing firms build new plants. This does not mean that in the short run there is no scope for expansion of output by existing firms—they may do so by over-utilisation of the existing plant *i.e.*, working a double shift where previously only one shift was the rule. The point is that this increase in output is not the result of installation of new plant. Thus the short-period equilibrium refers to an optimal position arrived at within the framework of a fixed stock of productive capacity.

The long period equilibrium refers to a situation where free and full scope for adjustment has been allowed to the economic forces. In the short period, if demand increases, this increased demand can only be met by over-utilising the existing plant. But if such a situation persists, then additional plant may be installed. In the long run, we allow the total stock of productive capacity to vary freely.

Based on this distinction, we may study the process of price formation in the case of (*i*) market price (*ii*) short period normal price, and (*iii*) long period normal price.

(*i*) The market price refers to the price prevailing at a moment of time. It is the result of passing events. The time is so short that additional supply if required can be had only out of the existing stocks. There is not enough time to increase the flow of the production even by over-utilising the plant.

(*ii*) Short-period normal price would prevail when time has been allowed for producers to adjust their flow of output to the changed demand conditions within the limits set by a fixed plant. Hence, in the short period, supply has greater influence over price than is the case with the market price, though the influence of demand is still greater than that of supply.

(*iii*) Long-period normal price would come about as a result of full and free adjustment of the forces of supply to those of demand. That is here we allow supply to exercise still greater influence because additional supply if needed can be had by installing new plants. In the present Chapter, however, we shall restrict ourselves to a study of the market price, and the short period normal price.

4. **Market Price.** As explained above, the market price is determined by the equilibrium between the contending forces of demand and supply *at a given moment. Market price is the price which tends to prevail in a market on any particular day.* It is influenced by changes in supply and demand *at the time.* These influences are temporary and short-lived. The next day, nay the next hour, demand and/or supply may be different. Market price is thus the outcome of passing events and forces which are transient. Hence market price fluctuates from day to day, nay from hour to hour.

Suppose there is a cattle fair. The supply of milk is considerably increased during these days. On account of this additional supply, the price of milk will come down. There will be a new equilibrium at a lower level. The price will be low enough to carry the entire supply of milk. But the equilibrium will be temporary. When the cattle fair is over, the old equilibrium will tend to be restored. Now in the month of *shradhs,* there is a very great demand for milk and the price of milk goes up. There is an equilibrium at the higher level. The price is high enough to scare away less urgent demand so that the existing supply is equated to demand. But when *shradhs* are over, the old price tends to return. The market price thus represents a changing equilibrium.

The time is so short that supply can only come out of the stock that is already in the market, or that can be brought at a short notice, or is ' in sight '. The question of its increase by further production, therefore, does not arise. The cost of production, therefore, has only an indirect influence on price. If the commodity is perishable and cannot last for more than a day (fish, for instance), the cost of production has practically no influence on price. It will be sold at a price which measures marginal utility of the consumers (taken in the aggregate) for the amount.

Competition plays a vital role in the determination of market price. Competition among sellers tends to lower the price and competition among buyers tends to push it up. But neither *all* buyers nor *all* sellers exert the same influence. It is the marginal buyers and marginal sellers whom the market price must satisfy. At this price, the marginal buyers are just induced to buy. If the price were even a bit higher, they would not have purchased. Similarly, marginal sellers are those who have been just induced to sell. At a little less price, they would have refrained from selling.

In the determination of market price we assume a perfect market (*See* Ch. XVI, Section 6). It is assumed, in other words, that all the buyers and sellers are in possession of full information regarding the conditions of demand and supply. They are fully aware of the prices being offered and accepted. This, however, is true of very few markets in the real world. This being so, the true market price does not come to be established straightway. Some transactions take place, at first, above or below the true market price and then by the process of trial and error, the dealers arrive at the true market price at which majority of transactions will be settled.

In a purely competitive market, the price is the only guiding factor for the buyers and sellers, no buyer having any preference for a particular seller, and *vice versa.* Since the market price for each seller is supposed to be fixed and it is assumed that he can dispose of his entire output at that price, there is no reason why he should lower his price even though his reserve price be less than the market price. If his reserve price is above the market price, he will not be able to sell anything, because so far as an individual seller is concerned, the demand for his product is perfectly elastic.

A wholesale change in supply and/or demand will respectively occur only if a large number of sellers change their reserve price and/or a large number of buyers change their decisions as to the amounts they are willing to purchase at the various prices. If the demand happens to be inelastic, the market price will fall rapidly as the supply is increased.

So far as goods already in the seller's possession are concerned, no sensible seller will interpret his costs in the sense of opportunity cost. Past outlays cannot influence present alternatives (costs). He would think not of what he spent yesterday (past) but rather of what he would get tomorrow (*i.e.*, future prices). If future prices are going to be higher, he will withhold stock, even buy for the future. If the price is expected to rule low in future, he will sell the entire stock and even sell short for future delivery.

Let us now see how prices of particular types of goods are determined.

5. When the Commodity is Perishable. An example will make this clear. Suppose a perishable commodity, like fish, is brought to a market on a particular day, to the amount of 100 seers. At what price will this quantity sell ? As the commodity is perishable, the whole of it must be sold away on the same day. We assume that the sellers of fish have no demand for fish themselves. There will be some fish eaters, who will be willing to pay perhaps a price of Rs. 5 per seer rather than go without fish, their marginal utility for fish being very high. But at this price, perhaps only five seers of fish will be sold. Similarly, there will be consumers who are willing to pay lower prices according to their marginal utilities. Let us make a demand schedule of this market. It will be something like this :—

Price per seer Rs.	Quantity demanded (seers)
5-0-0	5
4-0-0	7
3-0-0	12
2-0-0	20
1-0-0	40
0-8-0	60
0-4-0	80
0-3-0	100
0-1-0	150

The price will ultimately settle at 3 annas per seer, because only at this price can the whole of the fish be old. These consumers, whose marginal utility of fish is measured by annas 3, will be the marginal consumers, and they must be attracted if the whole fish has to be sold. But, as in a perfect market, there can be only one price for the same commodity, everybody will pay 3 annas for a seer of fish. Even the rich man, who was willing to pay Rs. 5 per seer will buy at the same rate. He will enjoy a consumer's surplus of Rs. 4/13.

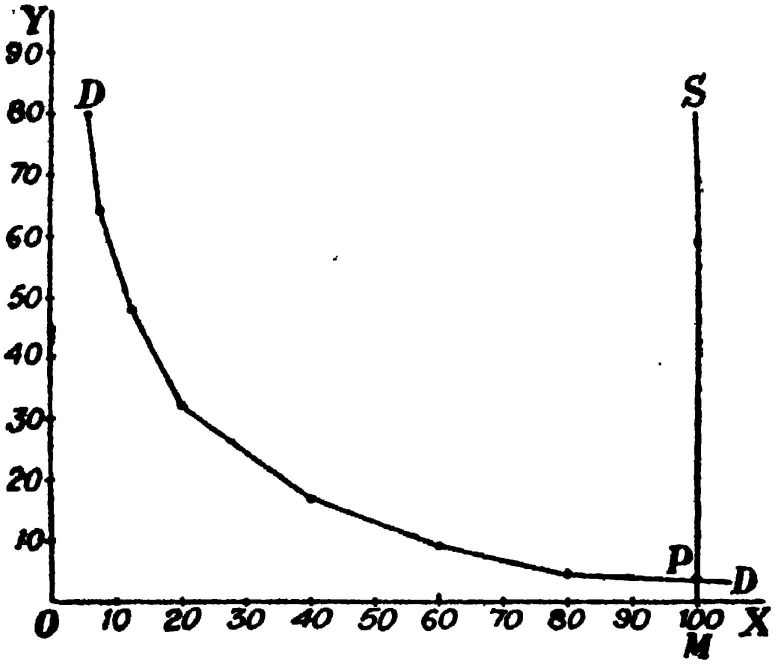

Fig. 38.

The accompanying diagram illustrates how the market price of fish will be determined.

Measure quantity along OX and price along OY. Since the supply is fixed the supply curve SM will be parallel to OY.

Let the point of intersection of the supply and the demand curves be called P. Then PM will be the market price at which 100 seers of fish will be sold. PM= as. 3.

6. Flexible Supply. In case the commodity is not perishable, it can be stored if the sellers expect better prices in the future. In that case, the amount offered for sale will not be fixed. It will vary with price. Take the example of toys. Taking the same figure of price as for demand, we could also have supply schedule for toys. If the price is very high (say Rs. 5), perhaps the whole stock will be offered for sale. But if the price falls low, some sellers would rather wait for the next day, or would rather keep the toys for their own children. In that case, the marginal utility of the sellers for the toys will be the minimum below which they will not accept any offer. The price at which the sellers are prepared to buy their own stock is known as *reserve price*. But in cases of flexible supply, producer's demand for their own goods is quantitatively unimportant and may, therefore, be ignored. Here the more important problem is how much to produce. This problem does not present itself when goods are irreproducible or the supply is fixed. Hence cost is the main factor which determines supply. The cost per unit will normally increase as the output increases. Thus the supply curve normally slopes upward from left to right. Thus :—

Price per toy Annas	Amount demanded Toys	Amount supplied Toys
80	5	100
64	7	90
48	12	80
32	20	70
16	40	65
8	60	60
4	80	40
3	100	20
1	150	10

After haggling and bargaining, the price will tend to be fixed at 8 as. per toy. This price is higher than the price at which fish was sold, because the sellers of toys can wait. Owners of 40 toys have refused to sell at this price. They would rather wait for better terms, or some of them would rather use the toys for their own children than accept a low price.

The price of 8 as. is the result of the equilibrium between supply and demand on that particular day, in that particular market for toys. The curve given above shows how the equilibrium price is reached in the case of toys.

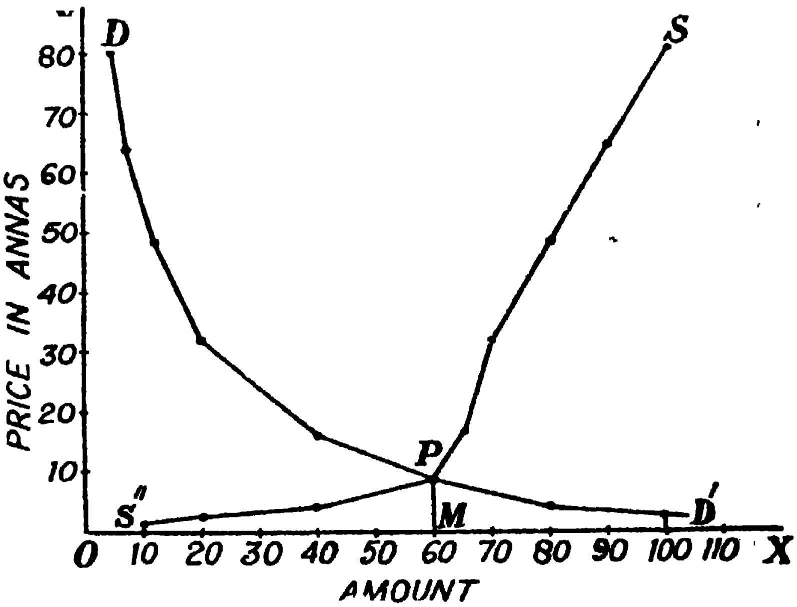

Fig. 39.

As before, price is measured along OY and amount (in units) along OX.

S'S″ is the Supply Curve, DD being the Demand Curve as before. P is the point of their intersection. MP thus is the equilibrium price, PM=8 as.

On the assumption that the amounts demanded or supplied can be increased infinitestimally, the curves will be smooth and continuous and not broken and discontinuous as above.

We have been trying to explain that the price is determined by demand and supply. The fact is that demand and supply are themselves determined by a host of other factors. "Supply and demand" is only a superficial formula. " Supply and demand are not ultimate explanations of price. They are simply useful catch-all categories for analysing and describing the multitude of forces, causes and factors impinging on price.''[1] (The several factors which influence demand and supply are discussed in Chapters VI and XVI respectively.)

7. Fixed Supply. So far we have assumed that the commodity concerned, whether perishable or durable, can be reproduced and this supply is flexible. How is the market price of commodities, whose stock is fixed, determined ? In such cases, the stock is not fixed for the day as in the case of fish or any perishable commodity. Here we are thinking of commodities whose supply is permanently fixed. Such commodities may be pictures by old masters, unique diamonds, old manuscripts, etc. In principle there is very little difference in these cases and the cases considered above. The stock of such commodities is fixed. The seller, however, can wait. Ultimately the price will be determined by the marginal utility of the consumers. The lowest limit of price will be determined by the marginal utility of the seller himself. The highest limit, if there is only one unit to be sold, will be determined by the highest offer among the purchasers. If there are a number of units of the same commodity and they are all on sale at the same time, price will be decided by the marginal utility of the consumers taken in the aggregate. Such a price will have no relation to the cost of production of the commodity. The question of cost of production does not arise since the commodity cannot be reproduced. Marginal utility is supreme here, whether the period is short or long.

There is a minimum price below which the sellers would not like to sell. It is called their *reserve price*. At this price, they demand their own goods as it were. The sellers' demand for their own goods is added to the buyers' demand to determine aggregate demand which, by interaction with the fixed stock, will determine price. This is represented by the diagram below.

FS is the fixed supply curve. DD is the curve representing sellers' own demand and TD (the dotted curve) the total demand curve. T is the point of interaction between the total demand and the fixed supply. But ST=PM. Hence PM is the price and the quantity sold is OM and unsold MS.

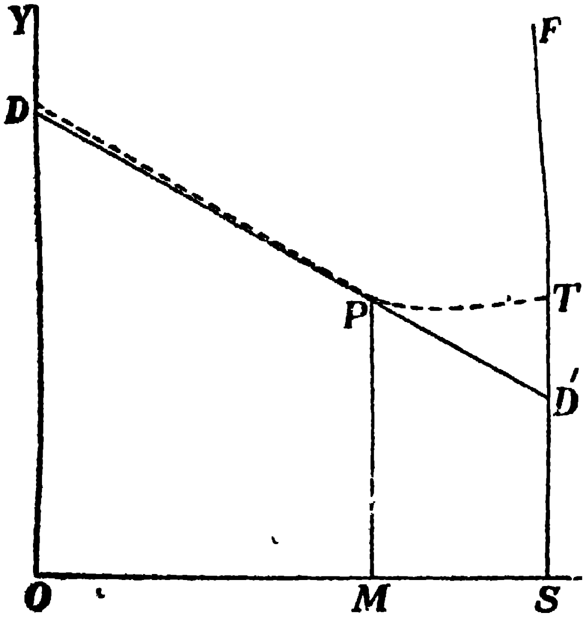

Fig. 40.

Such cases differ from the case of reproducible commodities in the fact that in the latter case the marginal cost of production ultimately sets limits to the increase of supply. Unless cost is met, reproducible commodities cease to be produced. This, however, is the problem of normal price as against market price. We shall consider it in a later chapter.

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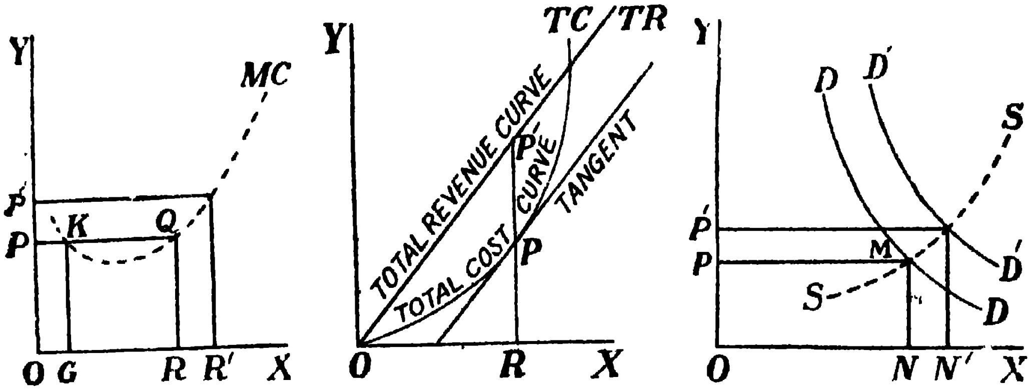
[1] Samuelson, P. A.—*Economics*, 1948, p. 462.

8. Short Period Normal Price. *The Equilibrium of the Firm.* The theory of the firm is based on the assumption that, in their behaviour, the firms are motivated by the urge to maximise their total money profits. Hence we get the equilibrium of the firm at the point where profits are the maximum. That will be the maximum output which a firm will produce with a fixed plant.

Under perfect competition, as explained in an earlier chapter, for an individual firm price is given. It cannot influence this price by its own behaviour. There being a large number of firms in the industry, the output of an individual firm is an insignificant part of the total output of the industry. Hence an individual firm has no control over the price. It works under the assumption that it can sell as much as it likes at the prevailing price. The demand curve facing a firm under perfect competition is perfectly elastic at the ruling price. Therefore extra receipts to be got by an additional production of one unit are equal to the price of the commodity. Profits will be the maximum when the extra receipts to be had by producing a unit of output just equal the extra cost incurred in its production. Now this extra cost is the addition to the total cost due to a unit increment of output and this is the same thing as the marginal cost. Therefore under competition, the short period normal price settles at the level where it is equal to the marginal cost. Hence the rule for short run equilibrium under perfect competition is:

Price=short run marginal cost



(*i*) Short period equilibrium of the firm.

(*ii*) Equilibrium of the firm with the help of TR and TC curves.

(*iii*) Short period equilibrium of the industry.

Fig. 41.

In the figure (*i*) MC is the marginal cost curve. Price OP is supposed to be given to the firm and hence output settles at the point where price equals marginal cost, *i.e.*, at OR. Now in the above figure (*i*), the price line intersects the marginal cost curve at two points K and Q. Why should then Q and not K be the point of equilibrium? The answer is that though the price line PQ intersects the marginal cost curve at K also, yet K is not the equilibrium point, for at K profits are not the maximum but the minimum. If output were to expand beyond OG total profits would increase because the extra cost of a unit of output will be less than extra receipts as measured by the price. Hence Q not K is the point of equilibrium for there alone we get maximum profits. Hence we modify our rule for short period equilibrium under perfect competition as follows :—

Price = Short run marginal cost and
marginal cost must be rising.

If price were to increase to OP′, then (OR′) will be the new equilibrium output.

Alternatively, we may depict the equilibrium position of the firm with the help of total revenue and total cost curves. Now profits are the difference between total revenue or receipts on the one hand and total costs on the other. The point where this difference is the maximum will represent the position of maximum profits and hence one of equilibrium.

In figure (*ii*) TC represents the total cost curve and TR the total revenue curve. The point where total profits are the maximum will be given by drawing two parallel tangents to these curves. TR being a straight line, a tangent to it will coincide with itself while a tangent to the TC curve parallel to the straight line TR touches it at P. PP then represents the maximum difference between the two curves and hence maximum profits. The corresponding output will be OR. Price or average revenue in this case equals P′R/OR, which will be the same as OP in figure (*i*).

Short run Equilibrium of the Industry. The industry will be in short run equilibrium where the short run industry supply curve intersects the industry demand curve. (How to derive industry supply curve has been explained in an earlier Chapter[1].) In Fig. (*iii*) the industry demand curve and the industry supply curve intersect each other at M and OP is the short period normal price and ON is the industry's output. If the demand curve shifts to the position of D′D′ the new equilibrium price will be OP and the new equilibrium output of the industry will be ON′.

9. Price Control and Rationing.[2] We are all familiar with price control and rationing. During a war, on account of inflation and other factors prices shoot high. The essential commodities are placed beyond the purchasing power of the masses. Unless the Government puts a ceiling on prices, the deep discontent may sway the masses into a revolution. The stability of the State is threatened and price control seems to be essential.

Price control is instituted generally at a level much lower than it would otherwise be, if the laws of demand and supply had been left free to operate. At this low price, there is a scramble for the scarce commodities—" a sort of game of musical chairs in which somebody is left holding the empty bag when the orchestra stops playing". To avoid chaos and inconveniences of the queue, price control must be supplemented by rationing. Black markets will spring up, the extent of which will, however, depend upon the people's sense of duty, patriotism and fairplay and efficiency of administration. The number of ration coupons issued must be such as to cut down demand to the available supply so that equilibrium is established between demand and supply at the ceiling price.

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[1] *See* Ch. XVII, Section 7.

[2] *See* Samuelson, P. A.—*Economics*, 1948, pp. 463-66.

In normal times, this equilibrium is established through the functioning of price mechanism, *i.e.*, the price rises to reduce demand to the level of short supply. But, during a war, price mechanism breaks down, or at any rate cannot be allowed to function keeping in view the vital interests of the community. The function of price mechanism is performed during a war by rationing and price control.

This situation can be represented diagrammatically as under :—

DD is the demand curve and SS is the supply curve. Left to themselves, they will equilibrate at the point Q. This being too high a price, the Government puts the ceiling RT. But at this price, demand far exceeds the supply. This is represented by the gap PP′. The price tends to shoot up which is indicated by the upward pointing arrow at PP′. The adoption of rationing cuts down the demand. The diminished demand is represented by the dotted curve D′D′ which is to the left of the old curve. Now this new (diminished) demand curve and the supply curve SS intersect at P which is the ceiling price. It is thus that an equilibrium is established between demand and supply by price control and rationing.

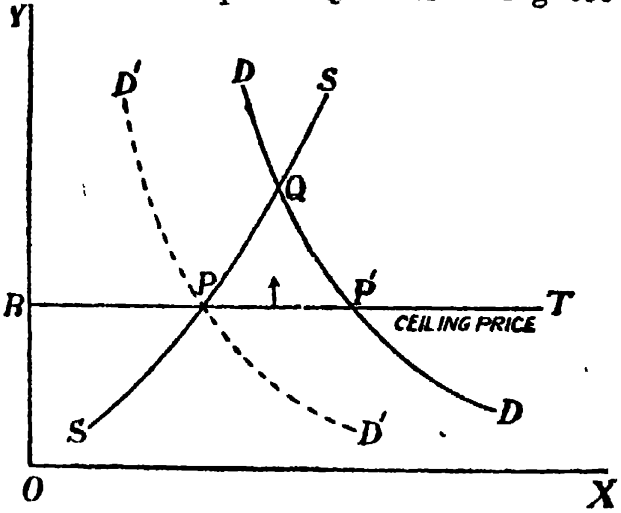

Fig. 42.

10. Laws of Supply and Demand. We are now in a position to enunciate some important laws of supply and demand. Benham has mentioned four laws :[1]

(1) Price tends to equate the amount which sellers are prepared to offer for sale and the amount which buyers wish to buy.

(2) Usually a larger quantity of a commodity will be demanded at a lower price, than at a higher price, and a larger quantity will be offered for sale at a higher price than at a lower price.

(3) An increase in demand tends to raise the price and to extend the supply; a decrease in demand tends to lower the price and contract the supply.

(4) An increase in supply tends to lower the price and to extend the demand ; a decrease in supply tends to raise the price and to contract the demand.

It may be noted that the nature of the supply curve (*i.e.*, whether it is elastic or inelastic) has an important influence on price or the quantity exchanged with a given change in demand. Prof. Meyers thus fomulates a proposition in this connection :

" Other conditions remaining unchanged, an increase in demand has a tendency to increase both price and quantity exchanged, and a decrease in demand has a tendency to decrease both price and quantity exchanged. With a given change in demand, the more elastic the supply, the less will be the proportionate change in price and greater the proportionate change in quantity exchanged. The less elastic the supply, the greater will be the proportionate change in price and the less the proportionate change in quantity exchanged."[1] If the supply is perfectly elastic (a horizontal straight line supply curve), there will be no change in price, but only a change in quantity exchanged when demand increases. If, on the other hand, supply is perfectly inelastic (supply curve a vertical straight line), an increase in demand will raise the price but there will be no increase in the quantity exchanged.

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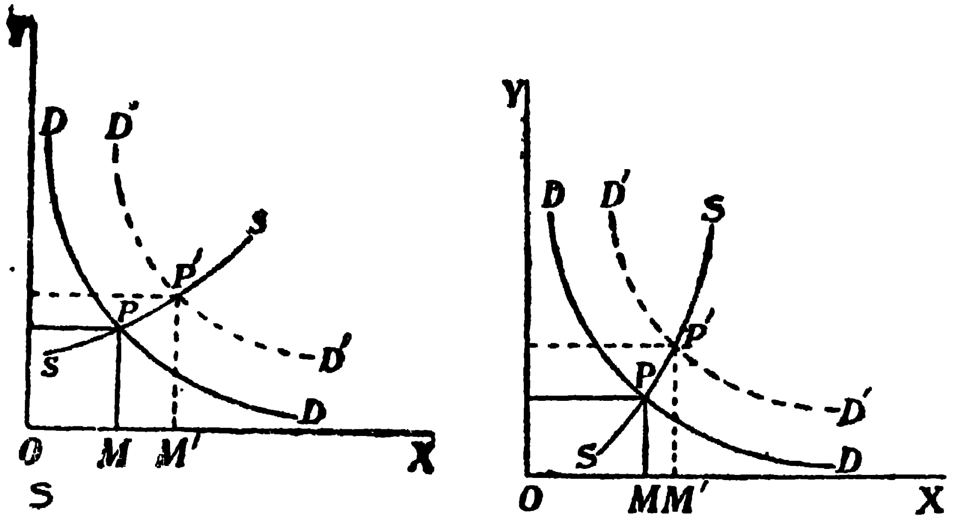
[1] *Economics*, 1940, p. 88.

The relevant diagrams will be as below :—

SS is the supply curve, DD the original demand curve and D'D' the new demand curve showing an increase in demand. The change in demand is the same but there is a difference in elasticities of supply. The resultant change in price is from PM to P'M' and in the quantity exchanged from OM to OM'. In figure (*ii*) indicating less elastic supply there is a greater proportionate change in price (PM to P'M') and less proportionate change in the quantity exchanged (OM to OM').



(*i*) Increase in demand with elastic supply.

(*ii*) Same increase in demand with inelastic supply.

Fig. 43.

Now let us consider the effect of change in supply on price and the quantity exchanged with different elasticities of demand. Prof. Meyers thus summed up his conclusions on the point :

"Other conditions remaining unchanged, an increase in supply will have a tendency to decrease price, and to increase quantity exchanged ; a decrease in supply will have a tendency to increase price, and to decrease quantity exchanged. With a given change in supply, the more elastic the demand, the less will be the proportionate change in price and the greater the proportionate change in the quantity exchanged. The less elastic the demand, the greater will be the proportionate change in price and the less will be the proportionate change in the quantity exchanged."[1] If the demand is perfectly elastic (horizontal straight line demand curve) and the supply increases, it will not lower price but only increase the quantity exchanged. If, on the other hand, the demand is perfectly inelastic (a vertical straight line demand curve), an increase in supply will mean only a fall in price but no change in quantity exchanged. The relevant diagrams will be as under :—

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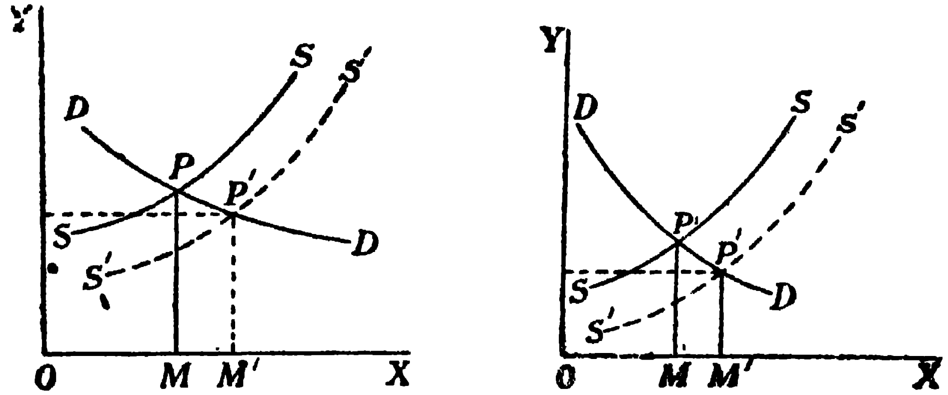
[1] *Elements of Modern Economics*, 1951, p. 130.



(*i*) Increase in supply with elastic demand.

(*ii*) Same increase in supply with inelastic demand.

Fig. 44.

In both figures DD is the demand curve, SS the old supply curve and SS' the new supply curve representing an increase in supply. In Fig. (*i*), the demand curve represents an elastic demand and in Fig. (*ii*) an inelastic demand. The reaction on price and the quantity exchanged is represented respectively by a change from PM to P'M' and from OM to OM'. In figure (*ii*) indicating less elastic demand, there is a greater proportionate change in price (from PM to P'M') and less proportionate change in the quantity exchanged (OM to OM').

When Demand and Supply both change. Applying the above principles when both demand and supply change, Prof. Meyers has inferred the following further principles[2] :—

1. When both demand and supply are changing in the same direction, the tendency will be for each to offset the effect of the other on price and to intensify the effect on quantity exchanged.
2. When both demand and supply are changing in the same direction but one changes more than the other, the curve which changes more will exercise the greater influence, but its effect on price will be less and its effect on quantity exchanged will be greater than it would be if the other curve had remained unchanged.
3. When both demand and supply are changing in opposite directions, the tendency will be for each to intensify the effect of the other on price and for each to counteract the effect of the other on quantity exchanged.
4. When both demand and supply are changing in opposite directions, but one changes more than the other, the curve which changes more will exercise the greater influence, but its effect on price will be greater and its effect on quantity will be less than would be the case if the other curve had remained unchanged.

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[1] *Op. cit.*, p. 133.

[2] *Op. cit.*, 133-35.

CHAPTER XIX

LONG TERM NORMAL PRICE UNDER PERFECT COMPETITION

1. Normal Price and Market Price. Having analysed the concept of cost of production, the determining influence on normal price, we are now in a position to study the theory of normal price. But before we do that, we should have a clear idea about normal price and see how it differs from the market price.

Market price may fluctuate due to a sudden change either on the side of supply or on that of demand. A big arrival of fish may depress its price in a particular market. A sudden heat wave may raise the price of ice. These are, however, temporary influences and cause temporary disturbances in the market value. In the absence of such disturbing causes, the price tends to come back to a certain level. This level itself may not be a fixed point for all times. But if the methods and scale of production remain on the whole constant, this level may be taken as a fixed anchor around which, in its day-to-day movements, market price oscillates. Adam Smith called this level "natural" price and Marshall has called it "normal" price. In the words of Marshall, "'*Normal*' *or* '*Natural*' *value of a commodity is that which economic forces would tend to bring about in the long run.* It is the average value which economic forces would bring about if the general conditions of life were stationary for a run of time long enough to enable them all to work out their full effect."

We may summarise the difference between market price and normal price as under :—

(1) Market price is the price which *actually prevails* at a particular moment as a result of the temporary equilibrium of forces of demand and supply at the moment.

Normal price, on the other hand, is not the *actual* price ; it is one which is only *likely* to be the price in the long run, and when that time comes, the actual price will be called the market price ; and some other price will be expected to prevail in the long run ; that price then becomes the normal price.

(2) Market price is governed by temporary causes and passing events, whereas normal price is influenced by permanent and persistent causes, for, in the long run, temporary causes disappear or neutralize one another.

(3) Market price fluctuates from day to day, even from hour to hour. But normal price, under given conditions, remains constant. It is the centre round which the market price oscillates or it is the level to which it tends to return after having departed from it temporarily.

(4) All commodities have a market price, but only reproducible commodities can have normal price. If the things cannot be pro-

duced at all, there is no sense in speaking of their normal price, for they have no cost of production.

2. Marshall's Theory of Value. We have by now familiarised ourselves with the forces governing demand (*i.e.*, marginal utility) and supply (*i.e.*, marginal cost). We are now in a position to grasp the theory of value as a whole. We begin with Marshall. He gives equal importance to cost of production and marginal utility in the determination of value. His famous analogy of a pair of scissors may be quoted. "We might as reasonably dispute whether it is the upper or the under blade of a pair of scissors that cuts a piece of paper, as whether value is governed by utility or cost of production. It is true that when one blade is held still and the cutting is effected by moving the other, we may say with careless brevity that the cutting is done by the second, but the statement is not strictly accurate, and is to be excused only so long as it claims to be merely a popular and not a strictly scientific account of what happens."[1]

Under conditions of perfect competition, there is a constant tendency for the forces of demand and those of supply to attain a state of equilibrium. "The price rests like the keystone of an arch, balanced in equilibrium between the contending pressure of its two opposing sides—demand on the one side and supply on the other."

For each individual, however, the market price is given. By his own individual action, he cannot modify it. For him the market price is an index by which he regulates his purchases and sales. These individual purchases and sales, price-determined as they are, become the aggregate total demand and total supply by the interaction of which the price is determined. Price, supply and demand are thus brought into closest inter-relation. Their relation is one of mutual causation. It can be compared to three balls lying in a cup and it is difficult to say which supports which.

Thus: "From the side of demand the price of an article tends to equal the marginal utility or the estimate of the marginal purchaser, which from the side of supply it tends to equal the marginal cost of production or the cost incurred by the marginal firm. The point of coincidence between the marginal costs and marginal utility, both as measured in terms of money, indicates the price". (Silverman)

3. Importance of Time Element. We have seen that price is determined by the equilibrium between demand and supply. But this equilibrium is not attained at once. Some time is needed for the forces of demand and supply to work themselves out. As time passes the unstable equilibrium becomes a stable equilibrium and a partial equilibrium changes into a complete equilibrium. It is thus that Marshall emphasizes the importance of the time element in the theory of value.

The relative importance of the influence of demand and supply, however, differs with time. "As a general rule", says Marshall, "the shorter the period which we are considering the greater must be the share of our attention which is given to the influence of demand on value; and the longer the period the more important will be the influence of cost of production on value. The actual value, at any time—the market value, as it is often called—is often more influenced by passing events and by causes whose action is fitful and short-lived, than by those which work persistently. But in the long period these fitful and irregular causes in a large measure efface one another's influence, so that in the long run persistent causes dominate value completely. Even the most persistent causes are, however, liable to change. For the whole structure of production is modified and the relative costs of production of different things are permanently altered from one generation to another''[1]. Changes occur both in conditions of demand and supply over a period of time.

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[1] *Ibid.*, p. 438.

Thus Marshall gives great importance to the *element of time* in the determination of value. It is on the basis of the time allowed to the forces of demand and supply for mutual adjustment that he classifies markets into four categories, *viz.*, market price, short-period price, long-period price and secular movements in price.

The time element influences value determination in another way. During the short period, it may not be possible for the entrepreneur to recover both the prime and supplementary costs ; but in the long run they must be covered. Also, costs which are supplementary with regard to the short period become prime in the long period.

4. The Nature of Long Run Cost Curves and the Determination of Normal Price. The long period price prevails in a period sufficiently long to enable the forces of supply to adjust themselves fully and freely to the changed demand conditions. And that brings us to a study of the nature of the long term cost curves.

We observed earlier that the short period average cost curve is likely to fall at first due to indivisibilities and other internal economies of large scale production and then starts rising when such economies change into diseconomies—increased difficulties of management and control, over-utilisation of plant, etc. Are the economies of scale likely to be important also in the long run ? The answer from the experience of real life is that they are. But here we are studying price formation under perfect competition, conceptual arrangement.

There has been some controversy among economists whether the economies of scale are due only to indivisibilities or some other factors like improved division of labour, etc. There is one school of thought which maintains with Kaldor that economies of scale are due only to the presence of indivisibilities and that in the long run all factors being divisible there should be no economies or diseconomies of scale, *i.e.*, firms should have constant long term average costs. The other school maintains with Chamberlain in that even if in the long run all factors were perfectly divisible, yet the long run average cost curve would fall at first because of the more efficient operations (due to better division of labour) made possible when the scale of output is larger and that ultimately it would rise due to inefficient operation which would result when output is expanded too much. Hence the long run average cost curve should also be a U-shaped curve.

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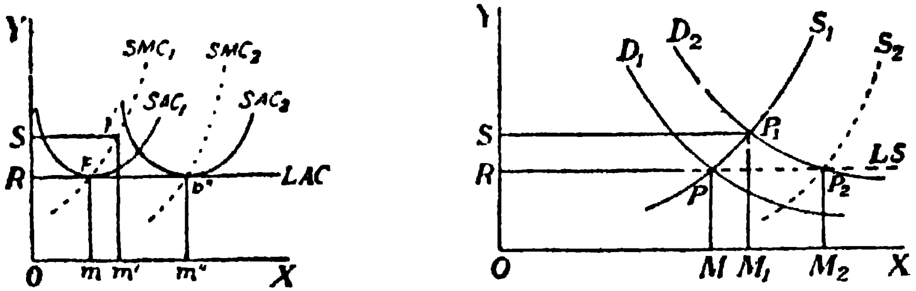
[1] *Op. cit.*, pp. 349-50.

We do not propose to go into this controversy but we shall draw all the possible cost curves, *i.e.*, under constant returns, diminishing returns and increasing returns.

(*i*) Constant costs or Constant returns.

Figure (*i*) relates to a firm and Fig. (*ii*) relates to the whole industry. In Fig. (*i*) SMC curves represent short period marginal cost, SAC, curves short run average cost and LAC long run average cost. In Fig. (*ii*) D_1 and D_2 are successive demand curves and S_1 and S_2 the successive short-period supply curves. LS curve represents the long period supply curve of the Industry.



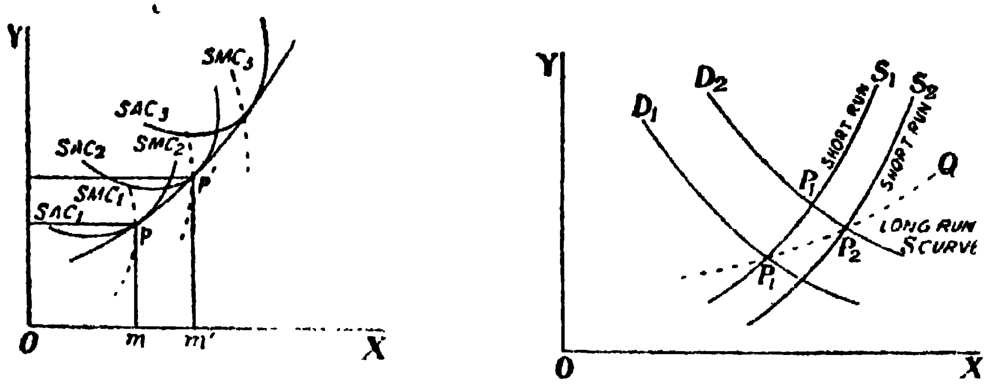
(*i*) The firm. (*ii*) The industry.

Fig. 45.

The short period equilibrium between S_1 (short run supply curve) and D_1 demand curve is at P (Fig. *ii*). The price is PM and the industry's output is OM. Now suppose demand increases to D_2. Price will rise to P_1M_1. The firm will be producing along rising average and marginal cost curves and since in the short period price is equal to marginal cost, the equilibrium output (Om') for the firm will be given by the point where the new higher price line intersects the SMC_1. Though price=SMC curve at the new level, it is greater than SAC curve and that means abnormal profits are being made. That would encourage a new plant to be installed and since there are no economies of scale to be assumed in this case the new short period average and marginal cost curves (SAC_2 and SMC_2) intersect each other at the same level of average and marginal cost as the SAC_1, and SMC_1. The long period average cost curve (LAC) would then be a tangent to the short period average cost curves at their minimum points and will be a horizontal straight line (Fig. *i*).

For the industry with an increase in supply we have the new short period supply curve S_2 intersecting the demand curve D_2 at P_2. Joining P and P_2 we get the long period industry supply curve, a horizontal straight line at the ruling long period price (Fig. *ii*).

(*ii*) *Increasing Costs or Diminishing Returns*. The two figures in this diagram are almost similar to what they are in the previous diagram in the case of constant costs. But you will see this difference that when demand has increased to D_2 and supply to S_2 the new equilibrium (*i.e.*, between D_2 and S_2) at P_2 is at a higher price. The long run average cost of the firm has gone up from pm to p'm'. This is so because the industry is subject to diminishing returns and the additional supply is obtained at a higher cost. The long run supply curve Q is made up of points like P_1P_2 which indicates a rising curve.



(*i*) The firm. (*ii*) The industry

Fig. 46.

(*iii*) *Decreasing Costs or Increasing Returns.* We have already said that continuously decreasing long run average costs are incompatible with competition because a situation like this must result in a monopoly. No doubt in manufacturing industries average costs fall when output is increased but this is only a temporary phenomenon. Diminishing return (or increasing cost) is the ultimate law of production. This case is, therefore, rare. Still it may be illustrated as shown here. D_1, D_2, D_3 and D_4 represent successive increases in demand and S_1, S_2, S_3, and S_4 increases in supply. The point of equilibrium P_1, P_2, P_3, and P_4 are on a falling curve which indicates falling costs.

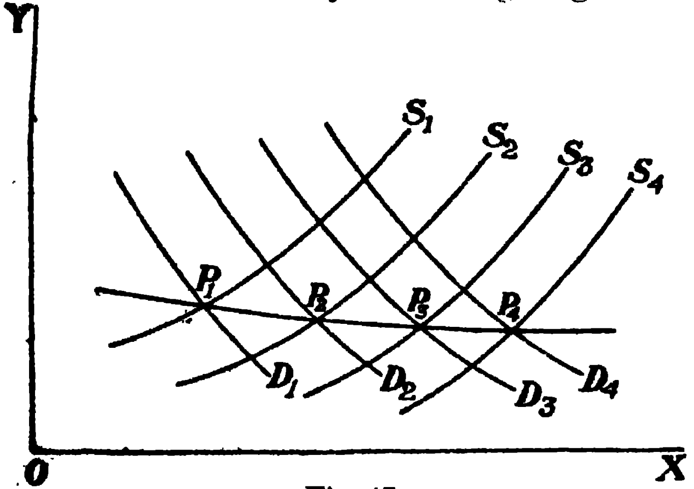


Fig. 47.

(*iv*) *The typical long-term average cost.* We shall, however, draw the typical long term cost curve to be U-shaped. Even if all other factors are perfectly divisible entrepreneur is one factor which is not and therefore when output rises at first there are economies of control and management but after a point output rises so much as to make for inefficient operation due to increased difficulties of control and management. If the long-run average cost curve is U-shaped, the long run marginal cost curve will be below average cost curve so long as the average cost curve is falling and above the average cost curve when it is rising. Marginal cost is equal to the long-run average cost at the minimum point of average long-run curve where it is neither rising nor falling. At that point, the long-run marginal cost curve intersects the long-run average cost curve.

5. Long Period Equilibrium and the Concept of the Optimum Firm. Having studied the nature of long-term cost curves,

we are in a position to formulate certain propositions regarding long-period equilibrium of the firm and industry. We already know that for a firm to be in equilibrium it must be earning maximum profits so that it has no incentive to re-arrange its output. And for profits to be maximum under competition

Price = Marginal Cost

This is true of short-run as well as long-run equilibrium. This is the necessary condition of equilibrium under perfect competition. For free and full equilibrium of the industry, it is essential that there be no further change in the output of the industry. Now a change in an industry's output can come about either by a change of output by the existing firms or by the entry of new firms. Now there will always be an incentive to the existing firms to add to their output if they are earning more than normal profits, and there will be an inducement for new firms also to enter this industry. Hence for the long-period equilibrium profits should be just at the normal level (and normal profits are part of average cost). Profits per unit of output will not be normal so long as price and average cost diverge. If average cost per unit is above the price of the commodity, it means that not even normal profits are being earned and hence there will be a tendency for output to contract—some firms who cannot earn even normal profits will move away from this industry. If price exceeds average cost, then more than the normal profits are being earned and there will be a tendency for existing firms to expand their productive capacity as well as for the new firms to enter this industry. Only when price equals average cost will profits just be normal and only when profits are normal that there will be no tendency for re-arranging the total output of the industry. Hence the second condition for full equilibrium of the firm is that

Price = Average Cost

We get two rules for full equilibrium under perfect competition :

Price = long period marginal cost
Price = long period average cost

The Optimum Firm But if price equals both the marginal and the average cost, then for the long-run equilibrium of the firm under perfect competition we have :

Price = Marginal Cost = Average Cost

Now when average cost curve is falling, marginal cost curve is below it. When average cost is rising, marginal cost must be above it. Hence marginal cost can be equal to the average cost only at the point where average cost curve is neither falling nor rising, *i.e.*, it is at the minimum point N. It is at the point of minimum average cost that marginal cost curve intersects the average cost curve and the two are equal there. Hence, in the long period, price under perfect competition equals the minimum average cost.

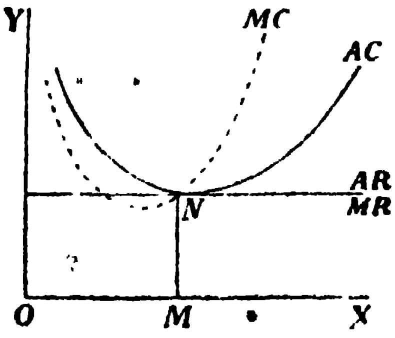


Fig. 48.

Price = Marginal Cost = Minimum
Average cost.

The conclusion that emerges is that, under perfect competition, price in the long run equals the minimum average cost and since price is given for all the firms under perfect competition, it is equal to the minimum average cost of all the firms in the industry. Hence under perfect competition, all the firms tend to be of an *optimum size* in the long run.

The optimum firm is a firm which has the most efficient combination of the various factors of production. From the point of view of the entrepreneur, it produces at the minimum average cost per unit. Its size is such that a little enlargement or a little curtailment would tend to lower its efficiency or, in other words, increase the cost per unit. Under perfect competition, every firm tends to attain the optimum size because such a size yields maximum profits to the entrepreneur.

It should be remembered that the optimum is not a fixed point. It is a relative not an absolute concept. It may be different with different sets of resources, changing with every modification in one or more of such factors. Improvements in technique and in the art or marketing and better facilities for obtaining capital may increase the size of the optimum unit. Any difficulties in commanding one or more types of resources, on the other hand, may make the optimum move in the reverse direction.

6. For the Optimum Firm Average Cost equals Marginal Cost. When a firm reaches the optimum size, its marginal cost and its average cost become equalized. This is a mathematical truism and can be illustrated by a simple example. Suppose a postman on his round of duty has a walking average of 15 miles a day. If by going round an additional day his average is reduced, it means he has done less than 15 miles that day; if it is increased he has done more than 15 miles; and if he maintains the same average he has done exactly 15 miles on the additional day. In the same way, let us suppose the average cost per unit of a producer is 15. If by producing another unit, his average cost is reduced, the additional (marginal) unit must have cost him less than Rs. 15. If the production of the additional unit raises his average cost, the marginal unit must have cost him more than Rs. 15. And, finally, if his average cost remains unchanged, marginal unit must have cost him exactly Rs. 15. In other words, in the third case his marginal cost and average cost are equal. Now the size of a firm is optimum when its average cost has stopped falling and has not yet started rising. In other words, *when the marginal cost neither rises nor lowers the average cost (is equal to the average cost)*, the firm is of an *optimum size*. This is the same thing as to say that for the optimum firm the marginal cost is equal to the average cost.

There is a tendency for average cost and marginal cost to coincide in the long run. If the marginal cost is higher than the average cost it means the price, which coincides with marginal cost, is higher than the average cost. Hence extra profits are made and production will increase. The additional production will be obtained at higher average cost and, in course of time, the two will be equalised. If, on the other hand, marginal cost, and therefore price, is lower than the average cost, losses are incurred and output will be reduced and the average cost will be lowered and brought down at par with the marginal cost.

In a perfectly competitive equilibrium, the price of a commodity is equal to its marginal and average cost of production. For any firm in equilibrium, marginal revenue and marginal cost are equal (*see* section 5 above). When the demand curve is perfectly elastic marginal revenue is equal to average revenue, *i.e.*, price. We have, therefore, two equations:

Marginal revenue=Marginal cost (condition for profit maximisation) ... ... (1)

Marginal revenue=Average revenue (condition for pure competition) ... ... (2)

∴ Marginal cost=Average revenue=price in perfect competition for a firm in equilibrium..

Now average revenue (*i.e.*, price), which is equal to marginal cost, may be (*a*) greater than (*b*) equal to, or (*c*) less than average cost. If (*a*), it will make abnormal profit and will thus attract new firms and the old firms will expand. The costs will rise and the difference between average revenue (*i.e.*, price) and average cost will be competed away. If (*c*), price will not cover average cost and losses will be incurred. Some firms will be compelled to close and other contract their business. Output will be reduced and price will rise to equal average cost. Hence only (*b*) will be true, *i.e.*,—

Price=Average revenue=Average cost (condition for long term equilibrium of the industry) ... ... (3)

From the three equations it follows that in a perfectly competitive equilibrium MR=MC=AR=AC.

7. Optimum Firm in Relation to Laws of Return. We have seen that when a firm has reached its optimum size, its marginal cost equals its average cost. Since its average cost remains constant its marginal cost is also constant. Thus to an optimum firm the law of constant returns applies. It produces its additional units at a uniform cost per unit whether conceived as average costs or as marginal costs.

If the size of the firm is smaller than the optimum, or in other words, if its expansion leads towards the optimum point, every additional unit will be produced at a falling cost. Since the marginal cost will be falling, its average cost also must fall. In other words, such a firm will obey the law of increasing returns.

If the size of the firm has passed the optimum size, in other words, if its expansion leads away from the optimum point, every additional unit will be produced at a rising cost. Since the marginal cost will be rising, its average cost will also be rising. That is to say, such a firm will be obeying the law of diminishing returns.

We have already seen that the law of diminishing returns is a matter of *defective proportions of factors* which combine for production. If the factors are combined in proper proportions, the tendency to diminishing returns disappears. Under perfect competition, factors are perfectly mobile. The result is that such a combination tends to be formed as gives the lowest cost per unit under the given conditions. The unit of production, in other words, tends to become of the optimum size. In the actual world, however, competition is not perfect. Hence, in spite of all efforts, the best combination of factors may not be possible. This may either be due to the difficulty of moving factors from one use to another or a high degree of scarcity of a particular factor, *e.g.*, land which cannot be increased. In such cases, the law of diminishing returns must operate.

The law of increasing returns may be due either because, to begin with, the size of the firm is too small and hence, as the size grows, economies of large-scale production are available, or certain indivisible factor or equipment (expensive management or expensive machinery, etc.) is being used partially, and expansion of output will result in less than proportionate increase in costs. This applies especially to firms or industries in which the supplementary costs form a high proportion of the total costs.

Thus both the laws, that of increasing and of diminishing returns› are the result of two sets of circumstances : (*i*). the matter of proper proportions, and (*ii*) of size. In many cases, these circumstances are independent. Let us take a concrete example.

Let us suppose a factory is installed to produce sugar with very efficient but expensive machinery. Suppose the machinery is best utilized if 15,000 maunds of sugar were produced in a year. But the sugar that is actually being produced is, say, 10,000 maunds. If, therefore, the size of the output is increased, average cost per unit as well as marginal cost will go down, because the expense of the machinery will get distributed over a larger number of units. This will go on until output produced is the optimum *i.e.*, 15,000 mds. Up to that point, the law of increasing returns will operate. The cost per unit will go down partly because of the use of the indivisible factor, and partly other economies of scale which we have studied elsewhere.

When the firm has reached its optimum size both marginal cost and average cost will stop falling and will become equal. For a time constant returns may be available. At this stage, the law of constant returns will be in operation.

Now suppose the firm expands still further. The ideal proportion of the factors will get disturbed. For instance, it may become too unwieldy to manage, or raw materials may become insufficient, etc. Once the proportions have been disturbed from their equilibrium position, some factors will become scarce relative to the others. All factors will not increase in the proportions which give the best combination, and hence the law of diminishing returns will set in. We may either say that the size of the firm has passed the optimum point, or that certain factors fail to increase, therefore defective proportions have resulted. Either the size must be decreased and the old optimum point re-established, or the scarce factors must be increased so that a new optimum at a larger size is achieved. If it is not possible to do either, the law of diminishing returns will operate. In the real world, it sometimes happens that neither can the scarce factor be increased nor can the relatively less scarce factor moved out of the firm or industry. This may be due to lack of perfect competition or absolute scarcity of a factor like land. Hence the law of diminishing returns is sometimes found in operation.

8. Optimum Firm *versus* Marshall's Representative Firm. It has been claimed that the concept of the optimum firm is superior to that of Marshall's Representative Firm for explanation of value. In the words of Marshall, the *Representative Firm* "*must be one which has had a fairly long life, and fair success, which is managed by a person with normal ability, and which has normal access to the economies, external and internal, which belong to that aggregate value of production, account being taken of the class of goods produced, the conditions of marketing them and the economic environment*"[1]. Thus such a firm is neither too well managed nor too badly managed; it is neither very new nor very old; and enjoys moderate economies of large-scale production. In a word, it represents its class as a typical firm.

It is the marginal cost of production of a representative firm to which according to Marshall, price tends to approximate in the long run. Firms that cannot sell at such a price have, sooner or later, to close down. Thoce which can just manage to sell at this price are marginal firms for such an industry. According to this view, therefore, normal price tends to equal the marginal cost of production of the average or representative firm.

More recent economic analysis rejects Marshall's concept. Pigou regards competitive equilibrium under increasing returns as a mathematical impossibility if increasing returns are due to internal economies and external economies which are independent of each other. Robbin's criticism has been even more trenchant. It is argued that the *concept of the "representative firm,"* like that of Ricardo's "economic man," is *too abstract and static* to have much practical utility. Industrial conditions being essentially dynamic, it is held it would be impossible in practice to locate the representative firm in any industry. Robbins thinks that the concept of the representative firm is unnecessary. He says: "There is no more need for us to assume a representative firm, or a representative producer, than there is for us to assume a representative piece of land, a representative machine, or a representative worker"[2]

The optimum firm on the other hand, is a concrete possibility. It is the unit of size which conscious direction and the forces of competition compel all firms to attempt to approach, who wish to survive the struggle for existence."[3]

Although Robertson has tried to defend the Marshallian concept of representative firm, yet the concept has been abandoned by modern economists because diminishing returns rather than increasing returns is the ultimate law of returns. The concept has been replaced by optimum firm.

Optimum firm differs Pigou's equilibrium firm which is only a hypothetical concept used in the discussion of law of returns. Such a firm is not supposed actually to exist. It simply refers to an imaginary position between firms on both sides of the equilibrium. Optimum firm, on the other hand, is a reality and refers to a position which is actually realised in the long run.

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[1] *Principles of Economics*, 8th Ed., p. 317.

[2] "The Representative Firm", *Economic Journal*, Sept. 1928. p. 393.

[3] Briggs and Jordan—*Text-Book of Economics*, p. 221.

9. Summary of Pricing Rules under Perfect Competition:

(*i*) The market price is the result of momentary equilibrium between demand and supply. Additional supplies can come out of only the existing stocks.

(*ii*) In the short period, equilibrium price is equal to marginal cost of production. At that point profits are the maximum. However, profits may be abnormal or subnormal at that point. If price exceeds average cost, then there are abnormal profits per unit of output. Hence, in the long run, new firms will enter the industry and the existing firms will expand their productive capacity. If price is less than average cost, then, in the long run, there will be a tendency for firms to leave this industry and output will contract. But the pricing rule for short period equilibrium price stands as

Price=Marginal Cost

(*iii*) In the long period, a firm will be in equilibrium if it is earning maximum profits. And hence one condition of equilibrium is that, in the long run,

Price=Long run Marginal Cost

For the industry to be in equilibrium, there should be neither any tendency for the existing firms to re-arrange their outputs nor for new firms to enter the industry. This will happen when firms are earning just normal profits, *i.e.*, when price equals average cost. Hence the second condition for long-run equilibrium under perfect competition is

Price=Average Cost.

(*iv*) Since, in the long period, price equals both average and marginal cost, in equilibrium, average cost coincides with marginal cost.

(*v*) Average and marginal costs will be equal only where the marginal cost curve intersects the average cost curve, *i.e.*, at the point of minimum average cost.

(*vi*) Price being given for the individual firms, they will tend to produce to the point of minimum average cost. Hence, in the long run, all firms will tend to be of optimum size under perfect competition.

(*vii*) Price, in the long run, therefore, is also equal to the minimum average cost per unit at the optimum output for a firm.

(*viii*) For the optimum firm in equilibrium average unit cost is neither rising nor falling. Hence there will be no competitive equilibrium if there are either increasing or diminishing returns. If there are increasing returns, firms will not be of optimum size and if the firms operate under decreasing returns even then they will not be of optimum size. An optimum firm works under constant costs.

10. Theory of General Equilibrium.[1] *Meaning of General Equilibrium.* In this chapter, while studying normal price, we saw how a firm or an industry as a whole would attain a position of equilibrium in the short period and the long period. But the theory of equilibrium is applicable not merely to price but to the entire economic system. When the whole economic system is in a state of equilibrium, it is called general equilibrium. It would imply that each firm is producing an optimum output, that each industry had expanded to the most advantageous position, that output and prices have attained long-term equilibrium, that all factors have been able to achieve their maximum rewards, and so on. In short, all sectors of economy are attuned to maximum efficiency and a position of maximum advantage, so that there is no inducement for any change whatsoever. " General equilibrium is the static state." Either there is no change or a change in a recurrent cycle and every movement in the economic system works towards the establishment of this equilibrium. Prof. Schumpeter calls it a " circular flow ". Prof. Knight thinks that general equilibrium implies a system of perfect predictability so that, if there is any disturbance in the system, adjustment is instantaneous. This adjustment is believed to be possible because the economic system is an integrated system of mutually interdependent prices both of commodities and the factors of production.

Conditions of Equilibrium. Since the equilibrium is largely established through the movement of factors of production from one industry to another, we might consider the conditions which should be fulfilled before factor prices may be in equilibrium. These conditions are :—

(*i*) All units of a factor must command the same price. Any disparity would indicate a disequilibrium and would necessitate the movement of low-paid units to highly-paid sectors. This will be achieved through competition. If, for example, wages of some workers are higher than those of others, the low-paid workers will compete against the highly-paid workers ; the employers too, will try to replace highly paid workers with low-paid ones. This will equalize wages. In the same manner, rent, interest and profits will be equalized.

(*ii*) The prices of the various factors must be proportionate to their marginal productivity. The relevant formula will be :

$$\frac{\text{MP of Factor A}}{\text{Price of A}}=\frac{\text{MP of Factor B}}{\text{Price of B}}=\frac{\text{MP of Factor C}}{\text{Price of C}}\cdots\cdots\cdots=\frac{\text{MP of Factor } n}{\text{Price of } n}.$$

(MP=Marginal Product)

If these ratios are not equal, *i.e.*, if

$$\frac{\text{MP of Factor A}}{\text{Price of A}} \text{ is greater than } \frac{\text{MP of Factor B}}{\text{Price of B}},$$

then it will be more profitable to use more of A and less of B so that equilibrium will be ultimately restored. Thus the law of substitution will operate wherever the prices of factors happen to be disproportionate to their marginal products. For instance, if labour happens to be cheaper than capital considering their relative efficiencies, it will pay to substitute labour for capital. This will raise wages and lower interest so that equality in the ratio will be restored.

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[1] *See* Meyers, A. L.—*Elements of Modern Economics*, 1951, Ch. 15.

Apart from changing the prices of the factors, another way of restoring equality in the ratio of their marginal products and prices is to change the marginal products. Thus when more labour is used not only will wages rise but the productivity of labour will fall. The effect on capital, for which labour has been substituted, will be opposite. In this manner, equilibrium will be restored. The equilibrium may be upset either by a change in factor prices or by a change in marginal products and the new equilibrium may be at different prices and different marginal products.

It is obvious that this readjustment depends on substitutability or elasticity of substitution of one factor for another. The extent of substitutability depends on the relative efficiency of the factors and on the relative changes in their prices. If existing firms in the industry are unable to readjust to new conditions, new firms may be established to restore the industry to its equilibrium position.

(*iii*) The third condition is a corollary from the second. Not only should the prices of the various factors be in proportion to their marginal products, it is also essential that the prices of each of the factors of production must be equal to their marginal products. If the marginal product is high, it will pay to increase output, and if it is low, the firm must contract. It only means that the firm must be in equilibrium as regards its output so that no expansion or contraction is essential. Expansion will lower the price of output (*i.e.*, lower marginal product) but raise the price of a factor. This will bring about an equilibrium between the marginal product and price if the former were greater than the later. Contraction will restore the equilibrium if the case was opposite. Inventions, changes in demand or other changes, may intervene to prevent the restoration of the equilibrium but the movement will certainly be towards its restoration.

(*iv*) The fourth condition is the full employment of all units of a factor whose supply price is either equal to or less than the prevailing market price of the factor. The unemployed resources will depress the factor prices. Idle workers struggling to get *any* wage will demolish the equilibrium.

Criticism of General Equilibrium Theory. The theory of general equilibrium furnishes us with the criteria by which to judge whether there are any maladjustments in the economic system or whether it is in proper trim. We can know whether the economic machine is functioning at the highest possible pitch of efficiency yielding the maximum possible satisfaction and consequently promoting economic well-being in the greatest possible measure. It also teaches us how the equilibrium position will be restored once it is disturbed. We can also see if the various movements in the system are working in the right direction.

But there is some unreality about this discussion inasmuch as in the real world of ours, where changes are taking place continuously and simultaneously, movement towards equilibrium is constantly obstructed and the effort at equilibrium for ever thwarted. The result is that the attainment of equilibrium remains a pious wish and an idle hope. This is due to the fact that the assumptions *e.g.*, technique and tastes remaining the same, homogeneity of the factors of production and infinitestimal variations in their units, their perfect mobility, prevalence of perfect competition, etc., on which the restoration of the equilibrium is based, are seldom fulfilled. Pure competition, the basic assumption, is a myth. Monopolistic competition is a nearer approximation to reality. The general equilibrium theory has, therefore, only an academic interest.

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CHAPTER XX

REAL COST IN RELATION TO VALUE

1. Introduction. In the last two chapters, cost of production was taken to mean money costs of production, or expenses of production as they are called. These expenses are important from the point of view of the producer. The price of the product, in the long run, must cover the expenses, inclusive of normal profits, otherwise production under the system of private enterprise (capitalism) cannot continue.

But from the point of view of the community as a whole, the money costs do not tell the whole story. From the society's point of view, it is the real cost which is more important. Real cost means the exertions and the sacrifices which various members of the society have to undergo to produce a commodity. The workers have to put in efforts, the capitalists have to save and wait for reward, and the landlords have to forgo the use of their property; only thus can the machinery of production be kept in motion. The production of a commodity, therefore, entails various types of efforts. They constitute the real cost of production.

Money Cost and the Real Cost do not coincide. It is very seldom that the real cost of a commodity may be equal to the money cost. As Marshall puts it, " If the purchasing power of money in terms of effort has remained about constant, and if the rate of remuneration for waiting has remained about constant, then the money measure of costs corresponds to real costs ; but such a correspondence is never to be assumed lightly.''[1] Thus there is very little connection between money costs and real costs. The two can never be equal in a world of change, as our world is, whether we consider the long period or the short period. The value of land depends on scarcity. The question of cost in terms of effort and sacrifice does not arise. The earnings of cinema stars, professors, coolies, sweepers, peasants and business men, etc., seldom correspond to the respective efforts and sacrifices undergone by each class.

Usually cost means money cost. But money costs ultimately are nothing else but prices that the producer has to pay for the various agents of production which he brings together to set the process of production in motion. We, therefore, cannot explain one set of prices in terms of another set of prices. Several attempts have been made to get out of this difficulty. Some have made labour as the ultimate measure and determinant of value; others have included also waiting (*i.e.*, capital). More recently utility has been made to explain short-period as well as long period value. There are thus three theories of value based on these three views respectively : (1) Labour Theory of Value ; (2) Cost of Production Theory of Value ; and (3) Marginal Utility of Value. Marshall combines the Cost of

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[1] Marshall—*Principles of Economics*, p. 350.

Production Theory and the Marginal Utility Theory. In this synthesis, however, his ideas of cost of production are merely an elaboration of the conception of the cost of production held by those, like Mill, who explained value in terms of "efforts and sacrifices".

2. **Alternative, Opportunity or Transfer costs.** In modern economic analysis, the term real cost is interpreted in the sense of opportunity cost or transfer cost. The American economist Davenport explains this concept as follows : " Suppose, for example, that a child has been given both a pear and a peach, that some predatory boy tries to seize them and that the only method of saving either is to drop one, say the pear, in the wayside weeds, and to run for shelter with the peach while the aggressor is picking up the pear. What has the peach cost ? True, the peach was a gift. In a certain sense, therefore, it cost nothing. Nevertheless it is retained only on terms of foregoing the pear. The term cost seems not quite satisfactory to cover the case. Perhaps *displacement* or foregoing would be preferable.' Or, if one offers you your choice between a ride and an evening at the theatre, it is awkward to say that the acceptance of the one is at the cost of the other. Yet the resistance to the taking of the one is the letting go of the other. Or, if with a dollar which you have earned you are at a choice between buying a book, or a pocket knife, and finally buy the book, the resistance overcome is best expressed, not by the labour devoted to the earning of the dollar, and not by the dollar itself, but by the alternative application of the dollar. The highest cost of the book—the best test or measure of its worth to you—was in the significance of its strongest competitor, the knife".[1] Since productive resources are limited, the production of one commodity can only be at the expense of another. The commodity that is sacrificed is the real cost of the commodity that is produced. In the words of Henderson. " Real Cost of *anything* is the curtailment of the supply of other useful things, which the production of that particular thing entails."[2]

Conceived on these lines, cost of production means not the effort and sacrifices undergone, but the *most attractive alternative forgone* or the next best choice sacrificed. Real costs are thus not entities, ultimate and independent of utility, but they are sacrifices of competing demands. In a money economy, it is "the amount of money necessary to induce the factors of production to be devoted to this particular task rather than to seek employment elsewhere".

Significance of Costs in this sense. There are competing demands (depending upon the marginal utility of the consumers) for the same resources. Since these resources are scarce, certain demands are satisfied only at the sacrifice of other demands. The resources tend to move from those uses in which their demand price (marginal utility to the consumers in the aggregate) is lower to those in which it is higher until they tend to be distributed in various uses (for the production of various commodities and services) in such a way as to equalize their marginal utilities in the various uses.

It is thus the demand price or marginal utility which determines how much of a particular factor of production will be utilized for the production of a particular commodity. The supply of a commodity, therefore, ultimately depends upon the attraction offered by the demand price (or marginal utility) to the relevant factors of production. If this demand price is not high enough, these factors will be used for the production of commodities the demand price for which is high enough to attract them. The cost of production of a commodity is fundamentally the sum total of retention prices that have to be paid to the productive services for retaining them in a particular industry, and this must at least be equal to what they can command elsewhere.

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[1] Davenport—*The Economics of Enterprise*, p. 61.

[2] *Supply and Demand*, 1932, p. 166.

The opportunity cost doctrine has a wide application in the field of economic theory. It applies to the determination of values both internally and internationally. It also applies to income distribution.

There are, however, some limitations in its application. It does not apply to productive services which are specific. A specific factor has no alternative use. Its transfer cost or opportunity cost is therefore zero. Hence the payment made to this factor is of the nature of rent, (preferably called non-cost outlays). Further, the doctrine of opportunity cost does not take into consideration the element of inertia. The factors may be reluctant to leave an occupation. In a case like this, where a factor's preference may have to be overcome, a payment exceeding the purely transfer cost will have to be made to induce it to take to an alternative occupation. In view of these non-pecuniary considerations, the notion of objective costs must be given up. The theory of opportunity costs can be re-stated thus : " The cost of productive service X in making A is equal to the amount of B that X could produce *plus* (*or minus*) the non-pecuniary returns (or cost) attached to producing B".[1] It has been suggested that non-pecuniary returns should be converted into pecuniary returns to restore objectivity to the theory. But it is not always possible to find a common monetary denominator for the purpose.

Besides, it should be remembered that units of productive service are rarely homogeneous.

Moreover, the theory is based on perfect competition which seldom exists.

Another discrepancy may arise on account of the difference in individual and social costs. A product may cost the factory owner Rs. 10 but to the society it will cost something in the form of ill-health due to the smoke his factory sends out.

With all these limitations and complications the theory of cost, *viz.*, theory of opportunity or alternative costs, is the most acceptable one at present. Certain features of this theory are worth noting.

(*i*) Cost of production of a commodity depends on demand prices of other commodities to the production of which the same productive service can contribute.

(*ii*) This cost analysis is not vitiated by the fact that a commodity is produced by the combination of several factors because marginal product of each factor can be ascertained.

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[1] Stigler, G. J.—*Theory of Price*, 1947, p. 108.

Now let us examine the various theories of value. To take labour theory first.

3. **Labour Theory.**[1] According to the Labour Theory, the value of a commodity is determined by the amount of labour spent on making it. The Labour Theory is associated with the names of Adam Smith, Ricardo and Karl Marx. Before Adam Smith, Petty and Locke also had regarded labour as the source of value.

Adam Smith regarded labour as the ultimate standard of value. " The real price of everything, what everything really costs to the man who wants to acquire it,'' wrote Adam Smith, " is the toil and trouble of acquiring it......what is bought with money or with goods is purchased by labour, as much as what we acquire with the toil of our body.''[2]

Smith, however, believed that only in earlier stages of society labour formed the basis of exchange value. Afterwards as land became scarce and capital accumulated, the owners of these also had to be paid, and labour ceased to be the only cost of production. Thus he was led to the Cost of Production Theory. Ricardo, on the other hand, thought that even in the contemporary world value of a commodity or the quantity of any other commodity for which it will exchange, depended upon the relative quantity of labour which was necessary for its production.[3]

Ricardo did not ignore land and capital as agents of production. The cost of land, according to his view, did not count because the price of grain was governed by the cost of production on the poorest land that was under cultivation, where no rent had to be paid. As regards capital, it was the result of labour applied in the past.

Adam Smith had admitted that labour varied in quality and hence could not be compared except in very primitive societies to which alone, according to him, the labour theory applied. But Ricardo, since he believed labour to be the foundation of value in advanced societies as well, had to explain this difficulty of comparing different qualities of labour. His explanation was that these differences were adjusted in the market so that each kind of labour got placed in its proper position in the scale of value, and the scale once formed was liable to little variation. " If a day's labour of a working jeweller be more valuable than a day's labour of a common labourer,'' says Ricardo, " it has long been adjusted, and placed in its proper position in the scale of value.'' But this explanation is far from convincing.

A common objection against the labour theory is that it does not explain the value of irreproducible goods. To this Ricardo replied that " there are some commodities the value of which is determined by scarcity alone......Their value is wholly independent of the quantity of labour orginally necessary to produce them, and varies with the varying wealth and inclinations of those who are desirous to possess them". In modern language, he meant that the marginal utilities of the consumers determined the value of such goods. So far he was in agreement with modern thought. But his explanation cannot satisfy the critics of the labour theory since it proves the inadequacy of this theory, if it proves anything at all..

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[1] *See* Fraser, L. M.—*Economic Thought and Language*, 1947, pp. 117-23.

[2] *Wealth of Nations*, Book I, Ch. V.

[3] *Principles of Political Economy and Taxation in works of David Ricardo by* Mc Culloch, p. 9.

4. The Socialists and the Labour Theory. The Ricardian theory of value had a special appeal to the socialists. Since labour was the sole originator of value, but actually wages formed a small portion of the total value thus created, it was easy to argue that the capitalist by taking the lion's share of the produce exploited the workers. Following Rousseau, the socialists Thomson, Gray and Bray had already developed the theory of capitalistic exploitation. Rodbertus and Karl Marx made it the central feature of their work.

Marx, the father of scientific socialism, gave his views on value in his monumental work, *Capital*, where he made a strong attack on the capitalistic system. Marx regarded value as crystallised human labour. To him the value of a commodity was the " labour time socially necessary" for its production. This he defined as the labour time " required to produce an article under the normal conditions of production, and with the average degree of skill and intensity prevalent at the time."[1]

Marx explained capital in the same way as Ricardo had done in terms of past labour. As regards differences in quality, his view was that " skilled labour counts only as simple labour intensified". A given quantity of skilled labour he considered equal to a greater quantity of simple labour. "Experience shows," he wrote, "that this reduction is constantly being made. A commodity may be the product of most skilled labour, but its value, by equalising it to the product of the simple skilled labour, represents a definite quantity of the latter labour alone." These proportions between skilled and unskilled labour are fixed by the force of custom, according to Marx. He attributed the higher value of skilled labour to the fact that such labour power costs more time and labour to produce than unskilled or simple labour power.[2]

5. Marx's Theory of Surplus Value and Exploitation. From his labour theory, Marx developed his theory of Surplus Value. He argued thus: For the worker to continue production, instruments and maintenance are necessary which he does not possess. He, therefore, sells his labour to the capitalist. For the capitalist, it is not necessary to pay the worker the full value of what he produces. Here Marx brings in the aid of another classical theory, the subsistence theory of wages, according to which wages tend to a level which is just enough to enable the worker to subsist. But the worker continues to work beyond the time necessary to produce his subsistence. In the words of Marx, " The labour process may continue beyond the time necessary to produce and incorporate in the product a mere equivalent for the value of the labour power. Instead of six hours that are sufficient for the latter purpose, the process may continue for twelve hours. The action of the labour power, therefore, not only reproduces its own value, but produces value over and above it. This surplus value is the difference between the value of the product and the value of the elements consumed in the formation of that product, in other words, of the means of production and the labour power.'"[1] This surplus value enables the capitalist to purchase more labour and to get more surplus value. Thus the capitalist class becomes rich at the expense of the working class. That is how Marx arrives at his theory of exploitation from his theory of value.

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[1] *Capital*, Vol. I, Pat 1, Ch, I sec. 1.

[2] *Ibid.*, Part III, Ch. VII, sec 2.

6. Criticism of Labour Theory of Value. The labour Theory of Value has been criticized on various grounds. Some criticisms apply to the general statement of the theory as by Ricardo, and others to its exposition by socialists, above all, Karal Marx. The various points of criticism are given below :—

(*i*) Labour is of various kinds of categories, and cannot be brought to a common standard. For instance, how can we compare the labour of a worker smashing stones on the road with that of a Field-Marshal smashing enemy resistance on the battlefield, or the labour of a Bernard Shaw dictating his dramas and that of his typist typing them ? Reduction by the force of custom of all labour to standardised unskilled labour is not a convincing explanation. Nor does the idea of "generally necessary labour-time" help us in the modern complex and changing world.

(*ii*) The value of a commodity may change, and frequently does change, after labour has been incorporated in its production. Marx explains it by saying that if the time socially necessary for the production of any commodity alters, all previously existing commodities of the same class are affected. Marx was thus thinking of the cost of reproduction, not of production. Labour, therefore, cannot be said to be the original cause of value ; it may be a measure of value on Marx's own showing. The two concepts are not the same.

(*iii*) The theory ignores the commodities that possess vaule but for whose production no labour is required, and also those which are valued disproportionately to the labour incorporated in them. Examples of the former are the discovery of a medicinal spring, autograph of a dead person, picture and statues by old masters, etc. Moreover, misdirected labour may produce no value.

(*iv*) Further, Marx's concept of surplus value, which is based on his labour theory, is criticized in the light of modern ideas or competitive equilibrium. Under competition, surplus value should disappear. In the words of Whittaker, "under conditions where the output of a single firm is small in relation to the total production of the industry (as was probably the case in the middle of the 19th century in the English textile industry from which Marx drew many of his examples) any expansion in the output of one firm could have little effect on the market price of the commodity produced. The surplus value per unit of output, therefore, would remain virtually unchanged. More units being produced, it followed that the total surplus value received by the firm would be increased. Obviously, the firm would be under the inducement to expand its output. Not merely one but all firms in the industry would be in this position. Yet if all expand, the market price of the product would decline, causing the surplus value to diminish and ultimately to disappear."[1]

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[1] *Ibid*, Part III, Ch. VIII.

Thus, the Labour Theory of Value, though superficially it appears to be in accordance with the ideas of equity and justice, fails to give an adequate explanation of value.

7. The Cost of Production Theory of Value. It was Cantillon who defined value (or intrinsic value as he called it) of a commodity as " the measure of the quantity of land and labour entering into its production, having regard to the fertility or produce of the land to the quality of the labour ". This, however, did not necessarily coincide with the market value of the commodity which depended on the demand of consumers. Thus he laid the foundation of the classical theory of value which was further built upon by Adam Smith, Senior, and J. S. Mill.

What Cantillon called intrinsic value, Adam Smith called "natural value ", and later on, Marshall called it normal value. The " natural " or " normal " value depended upon the cost of production according to the theory under consideration.

Ricardo explained capital by calling it past-labour. But Senior developed the concept of interest as payment for waiting or abstinence. He argued that abstinence as well as labour was necessary for production. Abstinence, according to him, was sacrifice, so that real cost of production, which determined value, consisted not merely of labour but labour and abstinence. Except that he excluded the rent of land as an element of costs, Senior's theory followed Adam Smith closely. He was conscious of the fact that since *competition is never perfect, value coincided with the cost of production* thus defined only in the long run.

J.S. Mill while accepting abstinence as an element of cost, elaborated the theory further by bringing in the influence of the "laws of returns." Like Senior, he also regarded the conformity of value to costs as a long-run phenomenon. But Mill changed the basis of discussion of costs from real costs of labour and abstinence to money costs. Marshall took over the cost theory of value at this point from Mill.

For Marshall, however, cost of production was only one blade of the pair of scissors, the other being marginal utility. Marshall attempted to reconcile money costs and real costs by saying that while money costs were important from the point of view of the employer, from the point of view of the community real costs (painful efforts and sacrifices of waiting) were fundamental. Moreover, he held that if the purchasing power of money, in terms of efforts, remained about constant, and if the rate of remuneration for waiting remained about constant, then the money measure of costs would correspond to the real costs ; but he wisely adds, "such correspondence is never to be assumed lightly."

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[1] Whittaker—*A History of Economic Ideas*, pp. 429-30.

We have already noted that the concept of cost of production as expenses of the entrepreneur, however useful for purposes of calculation, did not explain the problem of value, since it meant explaining prices of commodities in terms of prices of factors of production. Real cost of production in the sense of painful efforts could not be added unless converted to money-costs. Apart from this difficulty of the conception of cost, there were other weaknesses of the cost of production theory of value.

Criticism. The cost of production theory does not adequately explain the phenomenon of value.

The theory does not allow for the misdirected labour and capital.

Value of commodity may change after it has been produced. The theory does not explain scarcity value, especially the value of irreproducible goods like statues and pictures by old masters, etc. In some cases, it is not possible to determine the cost of production of particular goods or services. This happens in the case of by-products or articles produced jointly. Moreover, cost of production varies with different firms and for different units in each firm. Which of these costs determine value ?

The fact is that value is determined by the relationship between scarcity on the one hand and demand on the other. The scarcity may be due to high cost of production, or it may be due to any other cause. When it is due to high cost of production it merely means scarcity of the factors of production in the light of the variety of uses or alternative demands calling for their services. Thus it is possible to explain cost of production in terms of utilities or competing demands for the scarce factors of production. This new concept of costs is associated with the marginal utility theory of value.

8. Cost of Reproduction Theory. It is very seldom that the normal value of commodity is equal to the cost of production. In a dynamic world, where technique is constantly changing, cost of production, in the long run, is not likely to have any approximation to the cost of production today. Rather it will tend to approximate to the cost which may have to be incurred ; if the commodity has to be reproduced. Carey has, therefore, suggested cost of reproduction to take the place of cost of production as an explanation of normal value.

But it does not improve matters. As Marshall points out normal cost of production and normal cost of reproduction are convertible terms. What would be the cost in the long run really means what would have to be spent if the commodity has to be produced again, *i.e.*, cost of reproduction.

Although it may be conceded that there is a closer approximation between the price and the cost of reproduction than between price and cost of production, yet it cannot be said that cost of reproduction determines value. All the objections that have been put forward against cost of production theory may be repeated here.

Cost of reproduction can have some influence on price if one can conveniently wait till the commodity can be reproduced. Till the new supplies are forthcoming, price will depend on the intensity of demand.

There are, however, certain cases when the cost of reproduction has little influence on price. In the words of Marshall, "There is no connection between cost of reproduction and price in the cases of food in a beleaguered city of quinine the supply of which has run short in a fever-stricken island, of a picture by Raphael, of a book that nobody cares to read, of an armour-clad ship of obsolete pattern, of fish when the market is glutted, of fish when the market is nearly empty, of a cracked bell, of a dress material that has gone out of fashion or of a house in a deserted mining village."[1]

9. Marginal Utility Theory of Value. According to the Marginal Utility Theory of Value, *price is determined by marginal utility, or demand in relation to scarcity of the commodity concerned. The sole function of the cost of production is to determine the degree of scarcity of the commodity.* It is the degree of scarcity that is important whatever be the reasons for this scarcity. Thus the same principles will explain value whether the commodity is reproducible or not, whether the scarcity is due to the permanently fixed quantity of the commodity or due to difficulties of producing it, which latter may, in its turn, be due to the necessity of offering higher terms to attract factors for its production from other uses. But since higher terms are nothing else but higher demand price, it will be clear that demand price, or marginal utility of consumers, on which it depends, is the ultimate determinant of value. Here is a monistic instead of a dualistic explanation of value.

It may appear from the above that there is little difference between this view of value and that of the cost of production theorists, since they also hold that cost of production determines supply, which in turn determines prices. In fact, in spite of the seeming similarity in certain respects, the ground is fundamentally different. *According to the marginal utility theory, it is not the cost of production that determines value. Cost of production does influence scarcity, but even that indirectly and secondarily.* As we have seen, scarcity may not be the result of cost of production as in the case of rare objects. The determining factor, therefore, is not the entrepreneur's costs nor the painful efforts but, it is *competing demands. It is the competing demands to which supplies and cost adjust themselves.* The only sense in which costs influence price and value is the sacrifice of alternatives variously termed as displacement, alternative or opportunity costs. The demand price offered must, in the long run, cover those expenses of the entrepreneur which are necessary for withdrawing factors of production from their next best alternative uses. This conception of cost, therefore, is not independent of utility.

It is for this reason that the marginal utility theory in its most recent form is called the "monistic" as contrasted with Marshall's "dualistic" explanation of value. *For Marshall utility and cost were two independent categories and both contributed equally in the determination of value. The degree of their importance varied with time. According to the*

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[1] *Principles of Economics*, 1936, p. 402.

monistic explanation, the cost of production is also an aspect of utility and is not an independent category. Since costs represented alternative utility, both supply and demand came to depend on utility.''[1]

The identification of forces behind supply and demand has been pushed even further by the Austrian School and their followers, notably the English economist Wicksteed. The latter has shown[2] conclusively there is no fundamental difference between the psychological forces in the minds of the buyers and the sellers in the market. Below a certain price (called seller's reserve price) the seller appears in the role of a buyer because he withdraws commodity from the market if the price falls below that level. In other words, he purchases his own commodity, as it were, once this level of price has been reached. " It used to be a common custom at auction sales,'' write Bridggs and Jordon, '' of all kinds of sellers whose identity was unknown to the crowd to actually enter into competition in order to force up prices.''[3]

The Marginal Utility Theory is now the most accepted theory of value. Though its foundations, as mentioned above, were laid by Jevons in England and a group of Continental economists (Weiser, Bohm Bowerk and Menger) in the last quarter of the 19th century, yet the theory in its most recent form is associated with the names of Wicksteed,[4] Wicksell,[5] Davenport,[6] Cassell[7] and others.

The Marginal Utility Theory has general acceptance because (*a*) it offers an adequate explanation of value at all times, *i.e.*, value at any given moment and value in the long run ; (*b*) it explains fluctuations in value consequent on variations in demand or supply or both ; and (*c*) it gives "the only satisfactory explanation of the value of rare, soiled, incomplete or damaged articles, the price of which has no reference to cost of production, and of such things as water and sunshine, which although of inestimable utility, possess little or no value.''

10. The Influence of Laws of Return on Value. We have seen that value *at any time* is determined by demand relative to supply, but *in the long run* it tends to approximate to marginal cost of production. It is on the cost of production (and therefore on value in the long run) that the laws of return exert their influence. Let us see how value is influenced by the three laws of return.

(1) *The Law of Diminishing Returns.* When an industry is subject to the law of diminishing returns, the larger the production, the higher will be the cost per unit ; and, conversely, the less is the production the less will be the cost. Now if demand increases, price will rise and supply will be stimulated. But the additional supply will be obtained at a higher average cost. Price will, therefore, continue to be high. It will be quite the opposite, if demand decreases.

(2) *The Law of Increasing Returns.* When an industry is subject

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[1] Whittaker—*A History of Economic Ideas*, p. 458.
[2] *Commonsense of Political Economy*, Vol. II, Ch. 4.
[3] *Text-Book of Economics*, p. 78.
[4] *Ibid.*
[5] *Lectures on Political Economy.*
[6] *Economics of Enterprise.*
[7] *Theory of Social Economy.*

to the law of increasing returns, the additional output is obtained at less than proportionate cost. If, therefore, demand increases additional supply will mean lower cost. Hence price will tend to fall. Price will rise immediately when demand increases but it will come down ultimately or in the long run as supply is increased to meet increased demand. It will be quite the opposite if demand decreases. If, on the other hand, demand decreases, production will decrease. Under increasing returns, this would mean rising of the average cost. In this case, therefore, price varies inversely with supply, *i.e.*, more supply low price, and less supply high price.

(3) *The Law of Constant Returns.* When an industry obeys the law of constant returns, the cost remains the same whatever the scale of output. In case, therefore, supply has to be varied in response to variations in demand, the price will not be affected.

We must emphasize that the laws of return exert their influence in the long run, *i.e.*, on normal value (long period price) and not on market value (value at any given moment).

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CHAPTER XXI

INTER-RELATED VALUES

1. **Joint Supply.** There is hardly any case of isolated demand or isolated supply. On the side of demand, not only are there jointly demanded goods as substitutes but various demands of an individual become inter-connected because his income is limited and he must choose between competing demands. Similarly, on the side of supply, not only are there cases of joint supply but the supplies become inter-connected because factors of production are scarce. Let us see how value is determined in cases of inter-connected commodities. To take joint supply first, when two, or more than two, things are produced together they are in joint supply or are called joint products *e.g.*, mutton and wool, wheat and straw, cotton and cotton-seed, coke, coal and gas, etc.

The market price of each is determined by the equilibrium of the respective supply and demand. As regards normal price, the prices of joint products taken together must be high enough to cover their marginal cost of production again taken all together.

In such cases, either the two products (supposing they are two) are always produced in the same proportion, or the proportion can be varied. In the former case, a rise in the price of one will be followed by a fall in the price of the other, provided no corresponding change in the demand for the latter has taken place. In the latter case, since the proportions can be varied, a rise in the price of one may not lead to a fall in the price of the other to the same degree as in the first case.

Let us take the example of mutton and wool which are joint products of sheep. Suppose the demand for wool increases, the price of wool in the market will go up. Productiom of wool will become more profitable. More sheep will be reared to increase the supply of wool. But this will also increase the supply of mutton. But suppose the demand for mutton remains constant. The price of mutton must fall to take away the additional supply from the market. But, if by certain methods of breeding, new types of sheep can be produced which yield larger proportion of wool to mutton then it is possible to increase the supply of wool in a larger degree than the supply of mutton. In that case, the price of mutton will not go down to the same extent as before.

It is possible, however, in some cases to find out the marginal cost of production of each commodity separately by comparing different combinations of joint products. For instance, suppose a certain number of sheep of a certain breed yield a given quantity of mutton and a larger number of another breed, yielding more wool and less mutton, is required to produce the former quantity of mutton. Now the extra expense of rearing the larger number of sheep has resulted in the production of the extra wool. This is the marginal

cost of wool. In the same way, the marginal cost of mutton may be ascertained.[1] When the separate marginal cost can be ascertained, the jont products can be treated as separate commodities and their value determined as such.

Joint Products are the rule. In modern times, industrial technique has developed to such an extent that few products are turned out alone. The phenomenon of joint products, therefore, occupies a special importance in the discussion of economic theory. The by-products which were just thrown away in the past are being now put to commerical uses. There is now a very wide range of commodities turned out by all manufacturing concerns. Railways render several services at joint costs. The prices of such services (or goods) are fixed on the principle of "what the traffic will bear". It is not possible to ascertain the separate cost of production of each variety. Their prices are, therefore, determined on the principle of joint supply.

2. Joint Demand. Inter-related demand represents broadly two types of relationship; (*i*) Complementary, and (*ii*) Substitutive. To take the Complementary relationship first.

Commodities that are demanded together are in joint demand, e.g., pen and ink, motor cars and petrol, tennis balls and rackets, etc. But cases of derived demand are most significant in this connection. They consist of materials and services which go to the making of a final commodity.

When two commodities are complimentary, *e.g.*, fountain-pen and ink, increase in the demand for one, say fountain-pen, will increase the demand for the other (*i.e.*, ink) too. Also, if the price of one falls, it will result in increase of demand for both. This means that if the price of fountain-pens falls, price of ink will rise, because demand for ink will increase too. The extent of these price changes will depend on the degree of elasticity of demand for fountain-pens and supply of ink.

Let us take a concrete example. Suppose the demand for houses suddenly goes up and their prices rise. How will this rise in the prices of houses affect the prices of the various materials used in house-building? The immediate result will be a rise in the demand for such materials, and hence a rise in their price. But the rise in the prices of each of them will not be in the same proportion because their conditions of supply are not the same. Moreover, it may be possible to increase or reduce the demand for some of them by varying their proportion in the combination. Several considerations, therefore, will determine the degree of rise in price in each case, elasticity of demand combined with the degree of scarcity being the main factor.

Thus: (*a*) Other things being equal, the more scarce materials will show a higher rise in price. (*b*) It may be possible to reduce the proportion of certain materials in use if their prices rise too high. In that case, to some extent, such rise will be prevented. Cheaper substitutes may be available for some, hence their price will not rise so much. (*c*) Some materials may have high-paying alternative uses and, unless higher prices are paid for them by house-builders, they might move to other uses. Their prices will rise more than otherwise. (*d*) If the cost of a certain material forms a very slight proportion of the total cost of the final product, its price can rise quite high, since it will not affect, to any appreciable degree, the price of the final product, and hence its demand. If, however, the cost of a certain constituent (*e.g.*, labour) forms a high proportion of the total cost of house-building, its remuneration or price cannot rise very much since it will greatly raise the price of houses, and hence decrease demand for them. This will again bring down the price of houses and thus will react on the price of the materials or the factor whose price was inordinately raised.

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[1] *See* Henderson—*Supply and Demand*, pp. 68-9.

On the whole, therefore, *the price of such goods is determined by the marginal utility of the product in the production of which they contribute. In the long run, each must be used to such a degree as will equate its price to its marginal cost of production. In most cases, it is not possible to separate the marginal utility of each of them individually.*

In some cases, however, the marginal utility of a particular good of the group in joint demand can be calculated by taking two separate combinations in which its quantity is used in different proportions while the others remain constant. In the words of Henderson, "We can take the various possible combinations of the factors of production, and contrast two cases in which different quantities of one factor are employed together with equal quantities of others. The extra product which will be yielded in the case in which the larger quantity of the varying factor is employed, can then be regarded as the marginal product (or marginal utility), of the extra quantity of that factor. We can say that the employment of this factor will be pushed forward to the point where this marginal product will be roughly equal to the price that must be paid for it."[1]

We may conclude that the *price of the ultimate product at any given time depends on its demand in relation to its supply, but in the long run, it must cover the total of the supply prices of the various constituents used in making it.*

In case of substitutes, say tea and coffee, a rise in the price of one will shift the demand to the other whose price may, therefore, also rise. A fall in price will have the opposite effect. The concept of cross-elasticity offers a clue to this mutual relationship. Cross-elasticity in the case of substitutes can be found by the following formula :—

$$CE = \frac{\text{Relative change in the quantity of T}}{\text{Relative change in the price of C}}$$

Here CE is cross-elasticity, T stands for tea, C for coffee.

Can a particular factor in joint demand increase its remuneration by withholding its supply ?

If this factor is indispensable, its remuneration will have to be increased, otherwise production will stop. A check in its supply will check production. The price of the final product (say, houses) must rise. It must sufficiently exceed the total sum of the supply prices of the other factors. It will be out of this excess or margin that the non-co-operating factor (a particular group of workers) will be paid. Marshall enunciates the Law of Derived Demand thus :

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[1] *Supply and Demand*, p. 70.

> "The price that will be offered for anything used in producing a commodity is, for each separate amount of the commodity, limited by the excess of the price at which that amount of the commodity can find purchasers, over the sum of the prices at which the corresponding supplies of the things needed for making it will be forthcoming."[1].

There are certain conditions under which a certain group of workers will succeed almost invariably in raising their wages by withholding their supply. It is also a case of joint demand. These conditions are : (1) The demand for the final product (say, house), in the production of which the services of such people are required should be inelastic. (2) The services of this group should be indispensable and no suitable substitute should be available. (3) Their wages should form a small fraction of the total wages. In that case, it will be easy for the entrepreneur to meet their demand for increased wages. (4) The demand for other factors should be elastic and their supply should be inelastic so that even a small check in demand for them will decrease their supply prices. If the other factors are squeezable like this, the non-co-operating factor will be able to raise its remuneration.

3. **Composite Supply.** *Goods for which alternative sources of supply exist are said to be in composite supply since their supply is composed of the sum total of supplies from the various sources.* For instance, salt can be obtained from salt mines and also by evaporating sea-water. But the most significant cases are those of the substitutes. In the broadest sense, all commodities within the range of a consumer's demand are rivals of each other since he can substitute one for another. Here we shall confine our attention to substitutes in the narrower sense of tea, coffee and milk as drinks, beef, mutton and fish as meat, wheat and rice as grains etc. On the whole, the price of one is related to the price of the other. They tend to move in the same direction. Thus if the price of wheat goes up, many people will substitute rice or inferior grains in its place. The increase demand for such substitutes will raise their prices. On the other hand, a fall in the price of wheat will reduce demand for substitutes and hence lower their prices. *The total supply of all the substitutes in relation to the total demand will determine the price of each of them. Their prices move up and down together with a more or less fixed distance, from each other. The price of each tends to get adjusted, in the long run, at points where its marginal cost of production equals its marginal utility to the consumers in the mass.*

4. **Composite Demand.** *A good is said to be in composite demand, if it can be put to more than one use. Its total demand is composed of its demand for all these uses taken together.* For instance, coal can be used in the railway engine, the factory boiler, for heating rooms, for cooking etc. The price of coal in their various uses tends to be the same. For instance, if the demand for coal by railways increases, coal will flow towards railways. Its supplies for other uses will decrease,

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[1] *Principles of Economics*, 1936, p. 383.

hence its price will rise for those uses as well. *The price of commodity in composite demand is, thus, determined by its marginal utility in all its various uses. The marginal utility tends to be the same since the commodity can move from one use to another. In the long run, its price as usual must be high enough to cover its marginal cost of production.*

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CHAPTER XXII

VALUE UNDER MONOPOLY

1. Fixing Monopoly Price. In our study of value in the previous three chapters, we assumed that perfect competition prevails among the buyers as well as the sellers. In this chapter we shall assume the opposite condition, *viz.*, that of monopoly. Broadly speaking, the term monopoly is used to "cover any effective price control, whether of supply or demand, of services or goods : narrowly, it is used to mean a combination of manufacturers or merchants to control the supply price of commodities or services."[1]

Every producer and seller *aims at maximizing his net profits*. Under perfect competition, since price tends to equal the marginal cost of production, producers only realise normal profits which form a part of the cost. *Monopoly power consists in the ability of the monopolist to realise profits above the normal. This he does by selling his commodity above his marginal cost of production. The difference between marginal cost* and price is the measure of the *degree of monopoly power*.

It is obvious that no monopolist has the power to fix both the output and the price. He can either produce a given quantity of output and let the forces of demand (or rather elasticity of demand) of the consumers decide at what price his output could be sold. Or he can fix the price and let demand determine the output to be produced and sold. Usually the monopolist follows the latter course.

Now the question arises : *What price would be the most profitable to the monopolist ?* Theoretically speaking, he will fix a price which makes his monopoly gain the maximum. The limiting case is that of pure monopoly.[2] His income is constant which is equal to the whole income of the consumers. His monopoly profit will be the maximum if his total cost is the lowest. He is so powerful as to sell a minute portion of his product at a fantastically high price. Such a case is not a practical possibility. Actually, a monopoly price is not necessarily a high price, nor is it necessarily a very low price. If the monopolist fixes the price too high, very few units will be sold ; and if, on the other hand, the price is fixed too low he will get little profit per unit of sales. *He must, therefore, fix a price at which the figure obtained by multiplying monopoly gain per unit and the number of units sold is the maximum quantity.* To put the same idea in another way, to maximize his monopoly gain the monopolist "should keep increasing his output and sales beyond zero units, until the addition to the total revenue caused by adding one unit just equals the addition to the total cost cuased by adding this unit."[3] More technically speaking, the ***mono-***

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[1] Thomas, S. E., *op. cit.*, p. 215.

[2] *See* Ch. 15. Sec. I.

[3] Knight, B. W.—*Economic Principles in Practice*, p. 173.

polist should extend his output to the point where marginal revenue equals marginal cost.

2. Equalization of Marginal Revenue and Marginal Costs. We have already explained what is marginal cost. *It is the cost added to the total cost by the production of the additional unit.* In the same way, *marginal revenue may be defined as the revenue added to the total monopoly revenue by the additional unit sold.* It is obvious that as long as every additional unit produced and sold adds more to revenue than to the cost, it will pay the monopolist to increase his output and sales. If the additional output adds more to costs than to revenue, it will be profitable to reduce the output. *The point where marginal revenue and marginal cost just balance, represents the optimum output, i.e.*, output giving maximum monopoly gain. Where really will this point be, depends upon the nature of the demand and cost schedules.

The following is a simplified numerical illustration :—

Price (Rs.)	Units demanded (Doz.)	Total revenue (Rs.)	Marginal revenue (Rs.)	Units supplied (Doz.)	Total cost (Rs.)	Average cost (Rs.)	Marginal cost (Rs.)
9	1	9	9	9	81	9	17
8	2	16	7	8	64	8	15
7	3	21	5	7	49	7	13
6	4	24	3	6	36	6	11
5	5	25	1	7	25	5	9
4	6	24	—1	4	16	4	7
3	7	21	—3	3	9	3	5
2	8	16	—5	2	4	2	3
1	9	9	—7	1	1	1	1

In the above table, prices, units demanded and units supplied at each price are assumed, total cost is also assumed. The other figures are obtained as follows :—

(*a*) Total Revenue = Price × units demanded.

(*b*) Marginal Revenue : total revenue for 1 unit is 9, total revenue for 2 units is 16, marginal revenue for 2 units is 16—9 = 7, and so on.

(*c*) Average costs : Total cost ÷ units supplied.

(*d*) Marginal cost : Total cost for 8 units is 64.
Total cost for 9 units is 81.
Marginal cost for 9 units is 81—64 = 17.

If we assume that the unit of 1 dozen cannot be split, then monopoly gain will be made the largest if three units are produced and sold, since this is the output which makes marginal revenue and marginal cost equal. Thus :

Units	Total revenue (Rs.)	Total cost (Rs.)	Net monopoly revenue (Total Revenue minus total cost)
1	9	1	8
2	16	4	12
3	21	9	12
4	24	16	8
5	25	25	0
6	24	36	—12
7	21	49	—28
8	16	64	—48
9	9	81	—72

In the above illustration, monopoly revenue is maximum for three units and also for two units. If the unit could be split up, this arithmetical inaccuracy could be eliminated. The most profitable output, in fact, under the above conditions, should be 2½ units, *i.e.*, between 2 and 3 units.

3. Marginal Revenue and Average Revenue. Marginal Revenue may be carefully distinguished from average revenue. It may be noted at first that DD (demand) curve is also known as the AR (average revenue) curve, because it represents the average price per unit at which the various quantities of the commodity can be sold, and the price offered by the buyer is revenue from the seller's point of view. *Average revenue, therefore, corresponds to the general market price. Marginal revenue, on the other hand, is the net addition made to the total revenue by the sale of each successive unit.* The word *net* is important. When more is offered for sale the price must fall which means a loss on the units which were sold at a higher price before. This loss must be deducted from the total sale proceeds of the additional quantity offered for sale. Then we shall get *net addition* to the revenue, and that is the marginal revenue.

The relationship between average revenue and marginal revenue can be represented by the following diagram :—

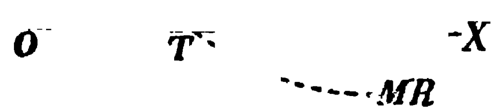

Fig. 49.

AR is the average revenue (or demand) curve and MR, the dotted curve, is the marginal revenue curve. If the demand curve is represented by a horizontal line (*see* Chapter XVII Sec. 8) *i.e.*, if the price remains the same even though output is increased both the curves AR and MR will coincide. In other words, the marginal revenue is equal to average revenue. This is so because increased supply has been sold at the same price as before and no loss has been caused which would have resulted if increased supply had forced the price down.

In case, however, AR is declining (or the demand curve slopes downwards) then there will be a divergence between the average revenue and the marginal revenue as is shown in the above diagram. It is quite obvious that when price is falling as indicated by the declining AR curve, the marginal revenue must always be less than the average revenue because a falling price must mean some loss on the sale of additional supply. That is why MR curve lies below AR curve. At point T, marginal revenue will be zero and then become negative, because additional revenue obtained by larger units will be offset by the loss in average revenue (price) on all previous units.

The relationship between marginal revenue and average revenue also depends on the elasticity of average revenue (*i.e.*, demand) curve. (Refer to Ch. VI, Section 14). At a point where elasticity of demand (average revenue) is unity, marginal revenue is zero, it is positive where elasticity is greater than unity and it is always negative, when the elasticity is less than unity. In other words, marginal revenue is always positive where the average revenue curve is elastic and always negative where the average revenue curve is inelastic.[1]

4. Optimum Output Under Monopoly. It is important to note that the *optimum output* (output giving maximum profit) is *smaller under monopoly than under competition.* We have already seen in an earlier chapter that, under perfect competition, an individual producer is incapable of appreciably affecting price by varying the amount of his output. This is so because his output forms an insignificant proportion of the total supply. He can sell as much as he pleases at current price. If he lowered his price a bit, he would be able to capture the entire market, and if he raised it a bit, he would not be able to sell at all. The elasticity of demand for the individual firm's product is infinite. Since his output is not going to affect the market price, he is free to regulate it to maximize his net profit. He produces an amount for which his marginal cost equals the price prevailing in the market. If this amount is less than this, he will gain by producing more ; if it is more than this, he will benefit by producing less.

The case of the monopolist is different. When he increases his output, he has to lower his price to sell the additional output. It is thus not only the price of the additional output that falls but the price of his total output goes down. *Since his output affects the price at which he can sell, price is not a given factor for him as it is for the man producing under competition. He, therefore, cannot extend his output to the same degree as the producer under competition can.* He can only expand it profitably up to a point at which his marginal cost equals his marginal revenue. This point arrives earlier for the monopolist than it does for the man producing under competition. This is so because his additional output lowers the price of his total output, while for the producer under competition the price remains unaffected. Hence the monopolist must stop expansion of his output at a point earlier than the producer under competition would do. The same reasoning applies when the producer is producing under imperfect competition.

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[1] *See* Stonier and Hague—*Text-Book of Economic Theory* (1953), pp. 97-8.

The table on the next page illustrates this point clearly. Here conditions of perfect and imperfect competition are compared. What is true of imperfect competition is true with greater force of monopoly.

The table shows that under perfect competition demand price [col. (*e*)] remains constant, since increase in output of any individual firm does not affect price appreciably. Since demand price is constant marginal receipts (or marginal revenue) is also constant for the producer under competition. The output will expand up to a point where marginal cost is equal to the demand price, *i.e.*, up to 11 units.

Under imperfect competition, as output expands demand price [col. (*h*)] goes down. Therefore marginal revenue also goes on decreasing until it becomes negative. In this case, the producer must stop expansion at 7 units. If he produces more, his marginal costs will exceed his marginal revenue. At 7 units, they are approximately equal.

Notice that for the producer under competition marginal receipts (or marginal revenue) is the same thing as demand or market price. For the monopolist or the producer under imperfect competition they are not the same. For 7 units (optimum output) demand price is higher than the marginal cost.

If elasticity of demand (average revenue) curve is less than unity, no monopolist will fix his output unless the marginal costs are negative. Because increase in output will mean, where costs are positive, that his total revenue (receipts) will increase less than his costs. In case elasticity is one (*i.e.*, demand increases proportionate to changes in price), the monopolist again will not fix his output there unless marginal cost is zero. Both these situations are improbable, since the monopolist's costs must be positive. "A monopolist's equilibrium position will always be where the elasticity of demand for his product is greater than one. For only in such conditions will it be possible for a monopolist with positive marginal costs to find an output where, if he decreases production, revenue falls by more than costs fall. If elasticity were not greater than one, a reduction in output would always raise profits."

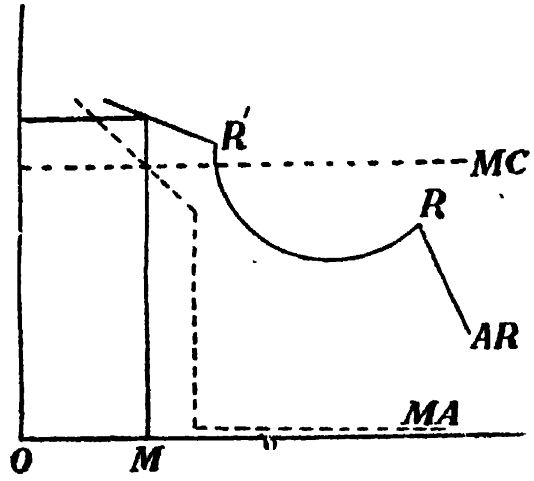

Fig. 50.

The adjoining diagram given by Stonier and Hague (in their book already cited, p. 167) makes the whole thing clear :—

Beyond R, elasticity is less than unity, between R and R′ it is unity and to the left of 'R' it is greater than unity. It is to the left of 'R' that the monopolist will fix his output. The output will be OM where marginal revenue is equal to marginal cost.

Cost Conditions				**Demand Conditions**					
Assumed indentical under Perfect as well as Imperfect Competition				Perfect Competition			Imperfect Competition		
(a) Units of output	(b) Average Cost	(c) Total Cost	(d) Marginal Cost	(e) Demand Price	(f) Total Receipt	(g) Marginal Revenue	(h) Demand Price	Total Receipts	Marginal Revenue
1.	15 10 0	15 10 0	15 10 0	10 0 0	10 0 0	10 0 0	14 8 0	14 8 0	14 8 0
2.	14 8 0	29 0 0	13 6 0	10 0 0	20 0 0	10 0 0	14 0 0	28 0 0	13 8 0
3.	13 8 0	40 8 0	11 8 0	10 0 0	30 0 0	10 0 0	13 8 0	40 8 0	12 8 0
4.	12 10 0	50 8 0	10 0 0	10 0 0	40 0 0	10 0 0	13 0 0	52 0 0	11 8 0
5.	11 14 0	59 6 0	8 14 0	10 0 0	50 0 0	10 0 0	12 8 0	62 8 0	10 8 0
6.	11 4 0	67 8 0	8 2 0	10 0 0	60 0 0	10 0 0	12 0 0	72 0 0	9 8 0
7.	10 12 0	75 4 0	7 12 0	10 0 0	70 0 0	10 0 0	11 8 0	80 8 0	8 8 0
8.	10 6 0	83 0 0	7 12 0	10 0 0	80 0 0	10 0 0	11 0 0	88 0 0	7 8 0
9.	10 2 0	91 2 0	8 2 0	10 0 0	90 0 0	10 0 0	10 8 0	94 8 0	6 8 0
10.	10 0 0	100 0 0	8 14 0	10 0 0	100 0 0	10 0 0	10 0 0	100 0 0	5 8 0
11.	10 0 0	110 0 0	10 0 0	10 0 0	110 0 0	10 0 0	9 8 0	104 8 0	4 8 0
12.	10 2 0	121 8 0	11 8 0	10 0 0	120 0 0	10 0 0	9 0 0	108 0 0	3 8 0
13.	10 6 0	134 14 0	13 6 0	10 0 0	130 0 0	10 0 0	8 8 0	110 8 0	2 8 0
14.	10 12 0	150 8 0	15 10 0	10 0 0	140 0 0	10 0 0	8 0 0	112 0 0	1 8 0
15.	11 4 0	168 12 0	18 4 0	10 0 0	150 0 0	10 0 0	7 8 0	112 8 0	0 8 0
16.	11 14 0	190 0 0	21 4 0	10 0 0	160 0 0	10 0 0	7 0 0	112 0 0	0 0 0

5. Laws of Return Elasticity of Demand and Monopoly Price. We have seen in an earlier chapter, that additional units of a commodity may be forthcoming at constant costs, increasing costs, or decreasing costs per unit. How far does this fact modify the theory of monopoly value? The principle of price determination remains fundamentally unchanged. The monopolist will in every case try to fix a price or produce an out put which gives him the maximum monopoly revenue. In every case, he will achieve this by pushing his output to a point where his marginal revenue equals his marginal costs. The laws of return, however, along with elasticity of demand will determine whether this will happen at a smaller or a larger output.

In each case, therefore, the monopolist will have to keep two factors in mind:

(*a*) How does his marginal cost behave with increasing output *i.e.*, which law of return is at work?

(*b*) How does the elasticity of demand of the consumers of the commodity behave?

Thus—

(*i*) If the article is being produced under the law of constant return, the elasticity of demand will determine whether more or less should be produced, since cost per unit is constant. If the demand is very elastic (*i.e.*, extends rapidly with a slight fall in price, and contracts quickly with a slight rise in price) then the monopolist will gain most by producing to the fullest of his capacity and lower his price. If the demand is inelastic, it will be to his advantage to restrict supply and charge high prices.

(*ii*) If production follows the law of diminishing return, it will pay the monopolist to restrict supply, and sell at a high price. The output will be the smallest when the article produced under increasing costs (diminishing return) meets with very inelastic demand.

(*iii*) If the commodity is produced under increasing return, it will be to the advantage of the monopolist to produce a large output and sell it at a low price. His output will tend to be the largest when the article produced under decreasing costs(increasing return) meets with very elastic demand.

6. Theory of Monopoly Value summed up. We thus come to the following conclusions regarding the determination of value under monopoly. These are also true for the cases of imperfect competition so far as they have an element of monopoly in them.

(*a*) As in perfect competition, price under monopoly is also determined by the interaction of demand and supply forces. But there is this difference, that the supply is under the control of the monopolist. He has two alternatives—either (*i*) to fix the price and leave the quantity to be sold (or produced) to the demand of the consumers at that price, or (*ii*) to fix the amount to be sold (or produced) and leave the price to be determined by the forces of demand in relation to this supply. He cannot do both of these things.

(*b*) If the monopolist fixes a very low price, he can sell a larger number of units than he can at a higher price. If he fixes a high price, his receipts per unit will be high, but he will sell fewer units. How demand will vary in response to variation in price will depend upon the elasticity of demand of the consumers of the commodity in question. In the case of inelastic demand he will fix a high price. But if the demand is elastic, a lower price will bring him the maximum. monopoly revenue.

(*c*) It will be in the interest of the monopolist to aim at maximizing his total monopoly revenue. He will, therefore, try to fix a price which makes his net revenue per unit multiplied by the number of units sold, a maximum quantity.

(*d*) If the commodity in question costs him nothing, the monopolist will expand his sales up to a point where his marginal receipts become zero. This is so because every positive marginal receipt will add to his monopoly revenue, there being no costs to cover.

(*e*) If the production of the commodity involves costs of production, then the *monopolist will produce that quantity of the output of which his marginal receipts are equal to his marginal cost of production.* If he stops short, increase of output will add more to total revenue than total cost. Hence total net profit will increase as output is increased. In case he produces beyond the point of equilibrium of marginal revenue and marginal cost, then a decrease of output will decrease the total cost more than total revenue. Thus, where marginal revenue is equal to marginal cost, monopoly profit is the maximum. This will be so whichever law of production is at work in the production of the commodity concerned. The most profitable amount of output, however, will be the smallest when the law of diminishing return in production meets with a very inelastic demand. It will be the largest when the law of increasing return in production meets with a very elastic demand. In the former case, a high price with a small output and, in the latter case, a low price with a larger output, will maximize monopoly revenue.

(*f*) Under perfect competition " marginal receipts" and selling price are the same since by selling more or less on the part of a seller under competition, price remains unaffected. Under monopoly (and imperfect competition) since sale price falls with increased sales at the optimum output (output giving maximum monopoly revenue), the marginal receipts or revenue will be lower than the selling price.

(*g*) Other things being equal, the optimum output will be of a smaller amount for the producer under monopoly and imperfect competition than the one producing under perfect competition. This is so because under imperfect competition, production must stop earlier than the point at which marginal cost becomes equal to selling price. The producer under competition can push his sales until his marginal cost is made equal to the prevailing market price.

(*h*) It is necessary to remember that in a dynamic world in which we live it is impossible to forecast precisely the changes in demand and cost conditions. A monopolist cannot be sure of discovering the point of maximum return. The important factor in pricing policy is not the true demand but only the monopolist's idea what the true demand is. By small adjustments of output and price and through the prices of trial and error, he may hit at the optimum output. But, the conditions keep changing and the optimum discovered today serves only as a guide for tomorrow.

7. Diagrammatic Representation of the Determination of Monopoly Price.

Fig. 51 shows the adjustment of monopoly output and price under the law of *increasing return or decreasing cost*[1].

AR is the demand curve—or average revenue curve; MR is the marginal revenue curve; ATUC is the average total unit cost curve and MC is the marginal cost curve. P is the point of intersection of the marginal revenue and marginal cost curves. Hence at the output OM marginal cost is equal to marginal revenue. This is the optimum output *i.e.*, at which monopoly profit is the maximum. At this output, the average revenue (or price) is TM and average (total unit) cost is QM *i.e.*, price is higher than the cost by TQ.

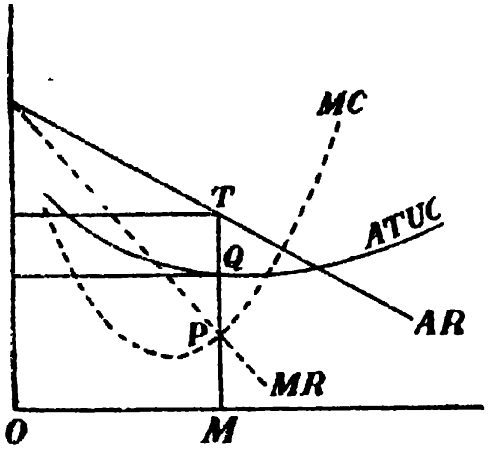

Fig. 51. Decreasing Cost.

∴ Monopoly profits = Total revenue, *i.e.*, area OMTS
minus Total cost, *i.e.*, area OMQR
= RQTS

This rectangular area, RQTS, representing monopoly profits is the largest that can be drawn under these cost conditions.

Fig. 52 shows how the monopolist adjusts output and price when the law of diminishing return or increasing cost operates.

In Fig. 52 cost curves are the same as in Fig. 51. But AR (average revenue) or demand curve is gently sloping and therefore more elastic. The demand is sufficient to induce the monopolist to produce beyond the point of minimum average cost. The optimum output is OM at which marginal cost and marginal revenue are equal. These two curves intersect at P. The average revenue or price is TM and average cost QM. TQ is the difference between average price and average cost.

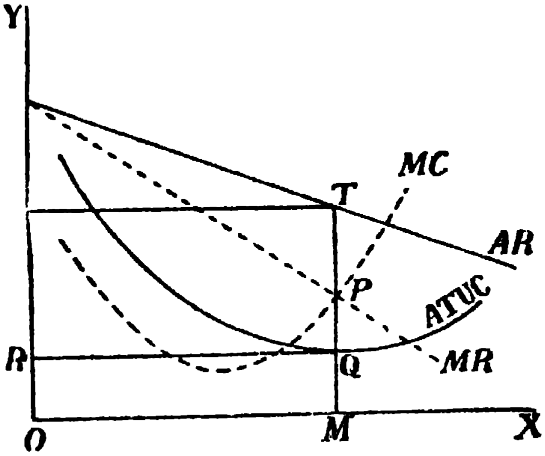

Fig. 52. Increasing Cost.

∴ Monopoly profit = Total Revenue, *i.e.*, Areas OMTS—Total cost, *i.e.*, area OMQR
= RQTS.

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[1] *See* Meyers, A. D.—*Elements of Modern Economics*, 1951, p. 180.

This is the largest area that can be drawn under this curve.

Fig. 53 relates to the case of constant cost represented by a horizontal line. At OM output, marginal cost (MC) = Marginal Revenue (MR). O P is the monopoly price and monopoly profit is shown by PQRL.

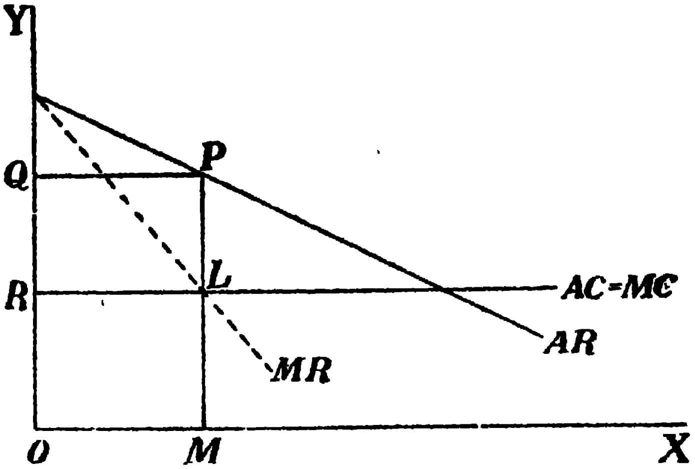

Fig. 53. Constant Cost.

One or two differences between perfect competition and monopoly or imperfect competition may be noted:

(*a*) In competition the marginal cost curve of the firm rises at or near the equilibrium-output. Falling cost curves are incompatible with equilibrium under perfect competition. But in imperfect competition a firm can be in equilibrium with rising, falling or constant marginal costs provided marginal revenue is equal to marginal cost.

(*b*) The second difference relates to the size of profit. Under perfect competition, super-normal profits will disappear but, under monopoly, super-normal profits will continue.

8. **Price Discrimination.** So far we have assumed that the monopolist charges only one price from all the purchasers of his commodity. This is generally not the case. The monopolist can and some monopolists do, charge different prices from different people provided these people form " different markets " or belong to what are called non-competing groups. This is known as price discrimination.

Price discrimination may be (*a*) personal, (*b*) local, or (*c*) according to trade or use. It is personal when different prices are charged from different persons. It is local when the price varies according to locality (*e g.*, dumping). Discrimination is according to use, when different prices are charged according to the uses to which the commodity is put, *e.g.*, electric current is usually sold cheaper for industrial uses than for domestic purposes. Sometimes the monopolist introduces product differentiation by means of special labels and charges discriminating prices. Price discrimination can occur because of:—

(*a*) consumers' preferences of prejudices,

(*b*) the nature of the commodity, and

(*c*) distance and frontier barriers.

Discrimination is possible because of the variations in the intensities of demand for the same commodity. These enable the monopolist, if he has complete control of supply, to divide the demand into a series of markets according to its intensity. He can thus charge higher prices from those who can afford to pay higher prices and lower from those who are only able to pay lower prices. This can obviously happen only if the commodity cannot be transferred from the cheaper to the dearer market. Also, discrimination prices can be charged when, owing to imperfection of the market, the customers cannot readily move from one seller to another.

The following main conditions are essential to make price discrimination possible and profitable :

(*i*) The elasticities of demand in different markets must be different. Then the monopolist can go on dividing and sub-dividing his market till no two buyers with different elasticities are put in the same group, or till in each market the elasticity of demand is the same. The monopolist will find it profitable to charge more in the market where elasticity is low and low price where it is high. To quote Mrs. Robinson, "The sub-markets will be arranged in ascending order of their elasticities, the highest price being charged in the least elastic market, and the lowest price in the most elastic market."[1]

(*ii*) The costs incurred in dividing the market, into sub-markets and keeping them separate should not be so large as to neutralise the difference in demand elasticities.

(*iii*) There should be complete agreement among the sellers, otherwise independent competitors will gain by selling in the dear market.

(*iv*) Discrimination is possible when goods are sold on special orders, because then the purchasers cannot know what is being charged from others.

According to Pigou, two conditions are essential for profitable and successful discrimination : (*a*) It should not be possible to transfer from one market to another any unit of the commodity sold in one market. This is the case when services are rendered direct to consumers *e.g.*, by teachers, doctors, lawyers, etc., or services applied direct to commodities, *e.g.*, transportation by railways. Transference may be obstructed by high transport costs or high tariff charges or by contracts penalising resales. (*b*) It should not be possible to transfer a unit of demand, proper to one market, to another market. This happens when markets are split upon the basis of wealth. A rich man cannot become poor simply to enjoy fee concession. A silk merchant cannot become a coal merchant to avail of lower freight rates.

Price discrimination and output. When the elasticities of demand in the two markets are different, it will be found that marginal revenue from the sale of a unit of output will be more where the elasticity is high than where it is low. It will be therefore, profitable to reduce the output and arise the price where elasticity is low and increase the output and lower the price where the elasticity of demand is high. In this way, the marginal revenue in the two markets will be equalised. But will the output on the whole increase, or decrease, or remain the same ? Mrs. Robinson gives the answers : "It is possible to establish the fact that total output under discrimination will be greater or less than under simple monopoly according as the more elastic of the demand curves in the separate markets is more or less concave than the less elastic demand curve; and that total output will be the same if the demand curves are straight lines, or in any other case in which the concavities are equal." This holds good, however, if marginal cost under simple monopoly and discriminating monopoly is the same. But if marginal cost is falling, the increase in output in a discriminating monopoly will be accentuated and if the marginal cost is rising, then the decrease in the output wil be accentuated. On the whole, it is more likely that discrimination will increase rather than decrease output.

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[1] Robinson, Mrs. Joan—*The Economics of Imperfect Competition*, 1945, p. 187.

A few illustrations will make this point clear. In the case of certain books, the first edition is issued at a high price. They, whose marginal utility (intensity of demand) for the book is very high, purchase it at this price. After this edition is exhausted, a second edition is issued which is priced lower than the first. People of lower marginal utility also can now purchase the book. This process may be repeated several times and a very wide sale obtained. People with greater intensity of demand will not wait for cheaper editions. In this way, the monopolist appropriates the major portion of the consumer's surplus and increases his monopoly revenue to a point otherwise not possible.

Is price discrimination beneficial to society ?[1] In certain cases, price discrimination may be to the advantage of a community, for instance when a particular service may be very useful to the community. If the price is fixed low enough for the poorer classes, production costs may not be met due to absence of normal profits per unit. If the price is fixed too high, the total receipts again may be low due to meagre sales. The commodity may therefore not be produced at all. At any rate, some output may be held up, because average revenue in a discriminating monopoly is greater than under simple monopoly. "It may happen, for instance, that a railway would not be built, or a country doctor would not set up in practice, if discrimination were forbidden. It is clearly desirable that price discrimination should be permitted in such cases." If discriminatory prices are charged, the total receipts may be adequate to meet the total cost with profit. Thus every one may gain from the production of such a commodity when discriminatory prices are charged.

Since discrimination involves raising the price for some people and lowering for some others, it is obvious that price discrimination is beneficial to some and harmful to others. But the net effect on social welfare will depend on which group the society likes to favour. If the price is lowered for the masses and raised for the 'classes' the society has nothing to regret for such an arrangement is obviously intended to promote economic welfare. But, in the case of geographical discrimination, it is also possible that the less elastic market (for whom the price is raised) may be the home market whereas the market abroad may happen to be more elastic and for them the price will, therefore, be lowered. In a case like this, the foreigners gain at the expense of the nationals of the country. Such a price discrimination is clearly detrimental to the community concerned. There is, however, one qualification. If the industry obeys the law of increas-

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1. *See* Robinson, J., *op. cit.* Ch. 10.

ing returns (or diminishing marginal costs) even the less elastic market will gain from the larger output (at reduced costs) in discriminating monopoly than under simple monopoly. Thus dumping abroad is likely to lower the price for the home market too and thus benefit the country concerned.

Mrs. Robinson thus concludes : "From the point of view of society as a whole it is impossible to say whether price discrimination is desirable or not. From one point of view, therefore, price discrimination must be held to be superior to simple monopoly in all those cases in which it leads to an increase of output, and these cases are likely to be the more common. But against this advantage must be set the fact that price discrimination leads to a maldistribution of resources as between different uses......Before it is possible to say whether discrimination is desirable or not, it is therefore necessary to weigh up the benefit from the increase in output against this disadvantage. In those cases in which discrimination will decrease output, it is undesirable on both counts."[1]

When discrimination takes the form of dumping it is regarded as an obnoxious practice.

9. Price Discrimination by Dumping. Dumping occurs when producers (usually monopolists) of one country sell their goods in another country at prices below those charged from the consumers in the country of origin. In some cases, it may pay a monopolist to sell his commodity in the foreign market below his cost of production.

The monopolist may have several motives for dumping : (*a*) to dispose of an overstock casually produced due to wrong judgment of demand, (*b*) to develop new trade connections by charging low prices, (*c*) to drive competitors out of the foreign market whether foreigners or native producers, and (*d*) to reap economie of large-scale production.

An extreme case of dumping may be illustrated as below :

HOME MARKET

Sale Price		*Cost Price*		*No. of units*	*Net Revenue*	
Rs.	As.	Rs.	As.		Rs.	As.
10	0	5	0	100	500	0
9	12	4	12	150	750	0
9	4	4	8	200	950	0
8	8	4	4	250	1062	8
7	12	4	0	300	1125	0
7	0	3	12	350	1137	8
5	12	3	4	400	1000	8
4	12	2	12	450	787	8

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[1] *Ibid.*, p. 206.

It will be seen that, if the monopolist only produced for the home market, he would produce 350 units and sell them at Rs. 7 a unit. This will give him the largest net revenue, *i.e.*, Rs. 1,137/8/0.

Suppose he produced 450 units instead of 350. His total cost will be Rs. $450 \times 2\frac{3}{4}$=Rs. 1,237/8/0. For 350 units his total cost would have been Rs. $350\frac{1}{2} \times 3\frac{3}{4}$=Rs. 1,312/8.

Thus the monopolist can *lower* his total cost by Rs. 75 (Rs. $1{,}312\frac{1}{2}$ =Rs. $1{,}237\frac{1}{2}$) by producing 100 units *more*.

It will be to his advantage to produce these extra 100 units even if he has to destory them. He can thus sell these additional units in a foreign market with profit if he can charge a price just above the cost of transporting them. No foreign producer can compete with him at such a price.

Such a big advantage, however, is rare. We took an extreme case to illustrate the principle involved. Moreover, if the difference between the home price and the foreign price is greater than the cost of transporting the commodity back to the country of its origin, the commodity may be re-exported, unless high tariff walls stand in the way. Foreign countries usually raise high tariff walls against dumping especially if it affects their own industries. It is a temporary phenomenon and does not confer any permanent benefit on the country into which foods are dumped. "The possibility of dumping in a foreign market will raise the home price if marginal costs are rising, lower it if they are falling and leave it unaltered if they are constant". (Benham).

The following diagram shows the method of price discrimination by the monopolist :[1]

The monopolist has divided his markets into two parts, one indicated by the demand curve D_1 and the other by D_2. AD represents the aggregate demand. MR_1 is the marginal revenue in one market, and MR_2 in the other. AMR is the aggregate marginal revenue curve. MC is the marginal cost curve. OM_1 is the output for market one and OM_2 for the other. The total output is OM. OM_1 is sold at P_1M_1 and OM_2 at P_2M_2. The monopoly revenue is shown by the area. Underlying AMR, the aggregate marginal revenue curve (total revenue) minus the area lying under the marginal cost curve (total costs). It can be seen that the optimum output (OM) is at a point where marginal cost curve (MC) cuts the aggregate marginal revenue curve (AMR). In each market the amount sold is one for which marginal revenue (MR_1 or MR_2) is equal to marginal cost ($CM=C_1M_1=C_2M_2$).

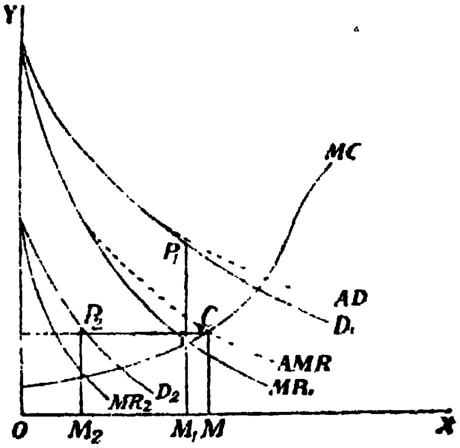

Fig. 54.

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[1] Joan Robinson, *op. cit.*, p. 183.

10. Is Monopoly Price a High Price? We have seen that monopoly power enables a monopolist to restrict his output and charge a price higher than marginal cost of production. Competitive price, however, tends to equal the marginal cost of production of the commodity concerned. This, however, does not mean that monopoly price is necessarily and invariably higher than competitive price. Several influences may keep the monopoly price down and in some cases may bring it to a level lower than it would be under competition.

The monopolist may be able to produce an article at a lower cost per unit on account of the exceptional advantages that he may enjoy as regards the scale of production, in advertising, marketing expenses and other overhead charges. Thus even though he may charge a price higher than his own marginal cost, it may be lower than would be the marginal cost under competition. This is the case especially with industries using large and expensive indivisible equipment, and the demand for the products of which is elastic. Expansion of output in such industries reduces cost per unit and larger output can be sold at remunerative, though low prices.

Normally, however, monopoly price is rarely lower than price under competition. But this does not mean that monopoly price is inordinately high price. As we have seen, there are serious limitations on the powers of a monopolist. He is not always able to charge prices which would theoretically maximize his profit. Apart from the fact that the monopolist may be ignorant of the level of the price, which gives him maximum returns due to difficulties of assessing the factors involved, there are certain considerations which few monopolists can ignore.[1]

But in spite of these restraining influences monopoly prices are generally higher than competitive prices. Our conclusion is that the monopolist is in a position to charge less, but he does not. Monopoly price thus need not be higher, but it actually is.

11. Price under Monopsony. The difference between competitive buying and monopsony buying is that, in the former case, there is a large number of buyers, and the purchases of none of them can affect the market price. To each the supply is perfectly elastic. A slight variation in his price offer will vitally affect the amount of his purchases; for instance, if he offered even a little less than the market price he will be able to buy nothing. The market price, so far as each individual purchaser is concerned, is given. He will buy an amount which equates his marginal utility to price. Under monopsony there is one buying agency or the buyers are supposed to act in a concerted manner.

A monopsonist will so regulate his purchases as to equate marginal cost to marginal utility since he must pay the supply price of the commodity. Under competition, it is the price or average cost which is equal to marginal utility. The difference between marginal cost and price will arise only when the industry is working under increasing or decreasing cost. When it is operating under the constant supply price, the average cost (*i.e.*, price) and marginal cost are equal and the amount purchased under competition and monopsony will be the same. When the industry is working under increasing supply price, the larger the amount the monopsonist purchases, the higher will be the price that he has to pay. The marginal cost to him will be greater than the supply price of the commodity. Under decreasing supply price, however, the larger the amount purchased, the lower will be the supply price and the marginal cost to him will be less than the supply price. In this case he will buy more than under competition.

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[1] Ch. XV, Sec. 6.

Just as the monopolist aims at maximising his profit, in the same manner the monopsonist aims at maximising his consumer's surplus, and consumer's surplus is maximum when the marginal cost is equal to marginal utility. This may be called the optimum purchase. If the amount purchased exceeds this, marginal utility will be less than marginal cost and the consumer's surplus will be reduced. Purchasing short would mean that utility is reduced more than the saving in cost.

A monopsonist can also resort to price discrimination like a monopolist by tackling the sellers separately. "The monopsonist will buy from each source of supply in such a way that the marginal costs to him of the outputs bought from each source are equal to each other and to the marginal utility of the whole amount purchased, in just the same way as the monopolist will sell in each separate market such an amount that the marginal revenues are equal in each market and equal to the marginal cost of the whole output. The possibility of discriminating with advantage will depend upon a difference in the elasticities of supply from various sources, that is, the elasticities of the average cost curves of each group of sellers."[1] To what extent the monopsonist can discriminate will depend on the number of the sellers and the supply conditions of each.

In a way, a monopolist is a monopsonist of the factors that he uses and if the factors are not homogeneous, he will be able to discriminate between them, especially in the case of an imperfectly elastic supply.

12. Bilateral Monopoly. This term is applied to a situation when a monopoly of purchase is matched with the monopoly of sale, *i.e.*, a single monopolist is facing a single monopsonist. In the real world, it is not common to come across such a situation. The monopolist wishes to operate on a scale where the marginal cost is equal to marginal revenue, because that will bring him the maximum monopoly profit. On the other hand, the monopsonist wishes to purchase an amount at which marginal cost is equal to marginal utility. This indicates one optimum price for the buyer and another for the seller. Which price between these two will be actually established, there is no economic principle to determine. Full knowledge about the demand and cost curves is lacking and it is not possible to indicate definitely the output and the price which will rule. The price will depend on the circumstances of each case. In most of the cases, it will be a compromise price which may be influenced by the respective bargaining powers of the parties. Besides economic motive, the administrative factors may also enter into the decision.

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[1] *Ibid.*, p. 224.

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CHAPTER XXIII

VALUE UNDER IMPERFECT COMPETITION

1. Imperfect or monopolistic competition. We have so far considered value under perfect competition and under perfect monopoly. Neither of these conditions are typical of real life. Most of the actual situations are intermediate between the two and are variously termed "*Monopolistic Competition*", "*Imperfect Competition*", or *group equilibrium*. In this chapter we intend to study value under such conditions.

When there is one or a combined body of sellers, it is a monopoly. But when there are several sellers, each having a market of his own, there is said to be imperfect competition or monopolistic competition. It is a case of competing monopolists. Neither are they producing identical articles as in perfect competition nor do they produce articles which are entirely different or only remote substitutes as in monopoly. There is product differentiation; articles produced are different but not altogether different. Still there is considerable competition. Hence this situation is more like competition than like monopoly.

When competition is imperfect (*i*) there are natural or artificial restrictions on the movements of factors of production from one employment to another. This prevents their marginal productivity in the various employments from being equalised ; (*ii*) the unit of control is large enough to be able to affect price by producing more or less ; and (*iii*) through advertisement and otherwise the dealers operate behind a smoke-screen so that prices and quality are shrouded in mystery. When competition is imperfect, rival producers, for reasons to be elaborated presently, cannot attract each other's customers by a slight lowering of the price. Consequently, they can charge considerably higher prices without losing their customers to their rivals . Such a situation has been called non-price competition. Their profits are safe. But extraordinary profits will be competed away in the long run by rivals making more similar articles.

The average revenue curve of each firm in monopolistic competition is independent and given. It slopes downward and its shape depends on the consumers' tastes and the action of *all* rival producers taken together.

2. How Imperfect Competition may emerge. Apart from the more or less clear cases of monopoly considered in the previous chapter, certain causes may lead to competition becoming imperfect. Here semi-monopoly situations may arise which may allow seemingly competing sellers to realise monopoly profits. Such a state of affairs may exist due to an imperfect market for goods produced by individual producers, even though similar goods are being produced by a large number of producers. The producers are able to create *differentiation in the minds of the buyers by* combining services with the product and by adopting other devices. This gives them a limited monopoly power. Such monopolistic competition may arise because of:—

(*a*) The existence of transport costs. The cost of transport may restrict the area of a market and thus keep out rival products from the field. This will enable a seller to charge monopoly prices.

(*b*) Lack of knowledge on the part of consumers. Consumers may be ignorant of the fact that they can buy an identical article from another producer at a lower price. They may pay prices higher than competition prices.

(*c*) Real or imaginary differences in quality. This is also called product differentiation. Consumers get used to a particular brand of, say, tea, coffee, soap, cigarettes, cloth, etc. This enables their producers to charge more than competition prices.

(*d*) Some consumers prefer to buy from shops situated in fashionable quarters, *e.g.*, Connaught Place (New Delhi) instead of Chandni Chowk or Sadar Bazar. The shopkeepers in Connaught Place, therefore, can charge (and do charge) higher prices for the same article.

In the last two cases, if the price charged is too high, the consumers may change the brand or the locality of purchase.

Symptoms of Imperfect Competition. Among the tests that may be applied to know whether there is pure competition or monopolistic or imperfect competition we may mention—(*i*) the practice of advertisement; (*ii*) the prevalence of different trade marks or labels; (*iii*) price quotations; and (*iv*) price variations.

If the dealers resort to competitive advertisement and isolate their products by branding them, it is obvious that competition is imperfect. Pure competition is concerned with a standardised product which needs no advertisement. If price changes are quoted in annas per maund the competition is perfect because the buyers seem to be responsive to small changes in prices. When prices vary widely, as in retail stores, competition is imperfect.

3. Value under Imperfect Competition. Price determination under imperfect competition differs fundamentally from pirce determination under perfect competition. When there is imperfect competition, the commodity bought and sold is not a standardised commodity but a differentiated product and competition is no longer on the price basis. Buyers are now buying a combination of the physical product and the services which go with it (location of store, packing, trade mark, personality of sales people and so on")[1]. The buyers are willing to pay for their favourite product something more than the market price of a standaridsed product, and this will depend on *the estimate in their own mind* as to the superiority of their favourite product regardless of its intrinsic worth or what the seller claims it to be.

Besides, under pure competition, so far as any individual seller acting alone is concerned, the demand for his product is absolutely elastic. He cannot influence the market price but he can sell any amount at the prevailing price without having any fear of depressing it. But it is different under imperfect competition. The seller knows that the buyer has a strong preference for his product or for that particular seller. There is no fear of substitution. This demand for the differentiated product is not so elastic. Hence the seller is in a position to fix his price.

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[1] Meyers, A. L.—*Elements of Modern Economics*, 1951, p. 138.

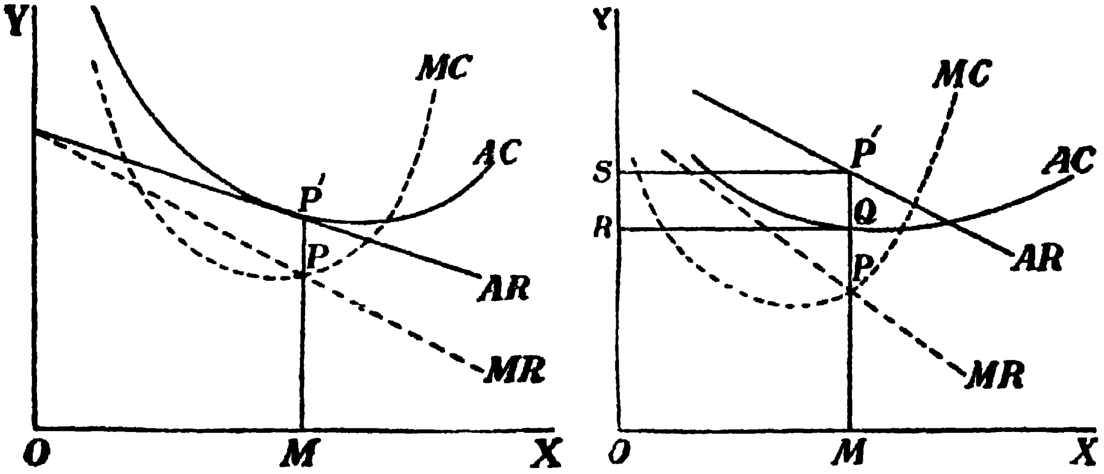
What are the considerations which influence the price policy under imperfect competition? Even under imperfect competition the sellers are naturally desirous of extending the boundaries of their markets and increasing the volume of their sales. This they can do by encroaching on other brands. But for this purpose price-cut will have to be greater than under pure competition to overcome the rational or irrational preferences of the consumers. The difference in the prices of the two competing products must be greater than the difference between the estimates of their value in the *minds of the purchasers*. Then it would be possible to entice away the users of rival products. When he resorts to price-cutting, he should bear in mind the possibility of retaliation by his rivals and the impossibility or the undesirability of raising the price later. Unlike the seller in a competitive market, the sellers of a differentiated product must take into consideration the long-run effect of the price policy they adopt. Price reduction on clearance sales or on standard and widely known varieties known as 'price leaders' is not to be confused with competitive price-cutting.

If a price-cut does not affect a rival considerably or attracts a small number of customers from a large number of rival dealers, fear of retaliation is minimised. On the whole, each seller has to proceed on the trial-and-error method. The prices of rival products keep changing; it is impossible to forecast precisely the reaction on the rival dealers and on volume of sales of a certain policy. To draw an accurate demand schedule is almost an impossibility. Generally, therefore, if a certain price has been found to be satisfactory, the seller under imperfect competition would stick to it.

Now what is the principle on which a seller of a differentiated product acts while fixing his optimum output and price? Imperfect competition is similar to monopoly with the limitation arising from the existence of close substitutes. The only difference is that under monopoly one monopolist, an individual or a combination, dominates the whole market, whereas under imperfect competition the market is split up into several sectors, and in each sector a petty monopolist rules. In each sector, therefore, the price is determined according to the principles of monopoly value. As in the case of a monopoly, *under imperfect competition price will settle at the point where the marginal cost and the marginal revenue of the producing unit are equal.* In order to maximize his profits each producer will go on increasing his output. His output will be optimum when his marginal revenue just equals his marginal cost of production. Marginal revenue, it will be remembered, is the revenue *added to the total revenue* by the sale of the additional output.

It must be mentioned, however, that the principle of equalising marginal cost and marginal revenue holds good in the case of monopolistic competition *so long as the demand curve for the product of the individual seller remains unchanged.* Entry of rival firms into business may affect demand and hence profits. To start with, when competition is imperfect, the demand is less elastic. Now suppose a new rival enters the field who offers identical services but from a more favourable situation to some customers. These customers will be enticed away and the demand curve will shift to the left. We might suppose further that another competitor comes in who offers superior services, *e.g.*, by employing more attractive salesmen and offering some new services. This will cause the demand to contract still further. If the entry of new firms is easy and if monopoly profits are being made, the influx of new firms will continue till finally monopoly profits disappear.[1] Increased competition may also affect the cost curves, *i.e.*, diminished output may be obtained at higher costs, and this will be an additional factor for the elimination of profits.

The table given in sec. 3 of the last chapter illustrates how value is determined under imperfect competition. It will be seen there that *under imperfect competition (as under monopoly) marginal revenue is less than the prices ; under perfect competition it is equal to price. Under imperfect competition, the optimum output is less than that under perfect competition,* optimum output being the amount for which the profit (monopoly revenue for the monopolist or producer under imperfect competition) is the maximum. The above diagrams represent determination of value under imperfect competition. Fig. (*i*) represents situation in the short run, and Fig. (*ii*) that in the long run.



(*i*)
(Short run)

(*ii*)
(Long run)

Fig. 55.

In the short run the optimum output is OM, where MR and MC intersect at P, *i.e.*, marginal revenue is equal to marginal cost. There is abnormal profit of P'QRS. But, in the long run, it is competed away (Fig. *ii*). The optimum output is larger.

4. Selling Costs.[2] The costs incurred on advertising, publicity and salesmanship are known as selling costs. Selling costs have been defined "as the costs necessary to persuade a buyer to buy one product rather than another or to buy from one seller rather than another.

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[1] *See Ibid.*, pp. 186-96 for diagrams illustrating the effects of entry of rival and the final situation when monopoly profit disappears.

[2] *See* Meyers, A. L.—*Elements of Modern Economics*, 1951, p. 195. *See* also Stigler, G. J.—*Theory of Price*, 1947, p. 157, and Joan Robinson—*The Economics of Imperfect Competition*, 1945, p. 335.

Obviously, if the market were perfect, *i.e.*, if the buyers were well informed about the prices and quality, advertising will be a waste. It will not win over any buyer. Advertising will also be unnecessary in a purely competitive market dealing in standardised products. Monopolist also need not spend on advertisement for there are no rivals. Actually, however, perfect competition or perfect monopoly are rare. Few buyers can be considered connoisseurs of quality or fully acquainted with market conditions. A very large number of brands are contesting for a buyer's choice. This creates a large scope for advertisement either to herald a new product or to remind the customers that an old product is still going strong. Selling costs are thus specially associated with imperfect markets or monopolistic competition. Product differentiation necessitates selling effort.

Advertisement is a very delicate weapon and it is impossible to assess its value. *First*, it is difficult to generalise. The same expense on advertising may yield a handsome dividend when incurred in a certain manner or under certain circumstances and may prove utterly barren otherwise. This is due to the fact that its success depends almost entirely in its appeal to uniqueness or novelty. When this element is gone, advertisement is a waste.

Secondly, there is no relation between the selling costs and the volume of business secured by a firm. *Thirdly*, since advertisement evokes counter-advertisement, selling costs are influenced very much by what the rival business men are doing. This competitive advertisement may eat up the profits so that none may benefit except the advertising agencies and the salesmen. *Fourthly*, the benefit from selling costs may accrue not only to the firm incurring them but also to its rivals. An advertisement by New India Insurance Company may prepare a person for insurance but he may go in for a policy in the Oriental Life Insurance Company instead. *Fifthly*, advertisement is based on the assumption that a large number of customers are prepared to change their preferences. This may not be the case. Resistance comes from the force of habit. It is not possible to find out how much of his business is due to repeat customers and how much to new customers won by advertisement. In the former case, selling costs should be treated as fixed costs and in the latter, variable costs. Full costs of advertisement should be charged to new business.

Selling Costs and Demand Curve. Selling costs (*i.e.*, advertisement and salesmanship) are likely to induce old buyers to buy more and to attract new buyers. This means an increase in demand. The new demand curve representing an increase in demand will be above the old curve or to the right of it. But it is not sure whether the new curve will have the same elasticity as the old curve. It will depend on the buying habits of the new customers. In case they are sensitive to price charges it will be more elastic, otherwise less elastic than the old curve. If the new customers are fully and permanently convinced of the superiority of the product the new curve will be elastic in the upper segments because price can be safely raised. If, on the other hand, the customers feel they can afford to purchase it only at lower prices, the new curve will be more elastic than the old one in the lower regions

5. Selling Costs and Optimum Output. There are three possible methods of selling a larger output of which advertisement is only one ; the other two methods are lowering price and improving quality. The intervention of selling costs adds to the difficulty of determining the most profitable output. It is obvious that higher total selling costs will be necessary to sell a larger output at the same price or the same output at a higher price.

In order to ascertain the optimum output the following formula may be used :—

Net Returns = (Price × Output) − (Production Cost + Selling Cost)

The problem is to find out that output at which the net returns will be the highest. We have already seen that selling costs create a new demand curve. One method of finding out the most profitable output is to regard the selling costs as a fixed cost in connection with that particular demand curve. A diagram may be drawn for such possible selling cost and the demand curve it creates.[1]

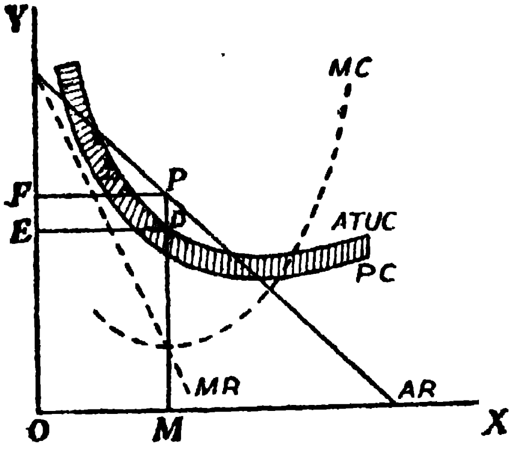

Fig. 56.

AR is the average revenue (demand) curve ; MR is the marginal revenue ; PC the average production cost ; the shaded area above it represents the selling cost. By adding this to PC we get ATUC, *i.e.*, average total unit cost. The area DEFP indicates the maximum return in this case.

In the above case selling cost has been considered as fixed cost. Another method is to regard the selling cost as a variable cost required to dispose of the increasing output at same price. The point of maximum net return will be found by taking different possible outputs and applying the formula given above. For each output, we find the new returns by deducting total costs (including selling costs) from total revenue. In this way, we can find out which output will yield the maximum return.

Increased Selling Costs **vs.** *Price Cutting.*[2] We have mentioned before that apart from inproving quality, there are two methods of increasing the sale or output, *viz.*, reducing the price or increasing selling costs (*i.e.*, spending more money on advertisement and salesmanship). Of these two alternatives which is better ? It is obvious that from the point of view of the buying public price reduction is much better, whereas, advertisement, at any rate some advertisement, may be regarded as an economic waste.

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1. Meyers, A. L.—*Elements of Modern Economics*, 1951, p. 201.
2. *Ibid.*, pp. 211-14.

From the point of view of the individual businessman advertisement is better than price cutting. Advertisement can be stopped if it does not produce results, whereas it is not wise to raise the price again once it has been reduced. Also, price cutting is regarded as professionally unethical whereas nobody objects to advertisement.

Further, business captured by the crude method of price reduction may be snatched away by a larger price reduction by the rivals. But advertisement seeks to create a delusion in the minds of the customers in favour of the advertised product. To the extent it succeeds the gain is permanent.

6. Size and Number of the Firms under Imperfect Competition. We have already seen that *under perfect competition, the number of firms are so adjusted that in equilibrium each of them will be of the optimum or the most efficient size.* Under such conditions, a firm of less than the optimum size will tend to expand. As it expands, its costs will fall while the price that it will receive for its additional product will remain the same as before. If competition is imperfect such a firm may not expand. Its expansion no doubt will result in lowering its marginal costs but it will also lower its price since its output appreciably affects price. It is quite possible that the loss incurred on account of lower price may more than balance the gain from the larger sales. The firm may thus have no incentive to expand. *Thus inefficient firms may continue to exist when competition is imperfect. All firms will not tend to be of the optimum size.* It will also be clear from the above that, *under imperfect competition, the number of firms in an industry may be larger than that under perfect competition. This is so because inefficient firms tend to be eliminated under perfect competition.* Under imperfect competition, efficient firms may not be able to drive inefficient firms out of the market. Because to do this the efficient firms will have to lower their price considerably to overcome the prejudices of the customers of inefficient firms. This the former might not think worthwhile doing. A slight reduction in price under perfect competition, on the other hand, would, by attracting all the customers of the inefficient firms, drive them out.

Thus when competition is imperfect, there may be a large number of firms each producing an output which is less than the optimum. Most of them may be earning more than normal profits. The monopoly here may consist only in the fact that each has a semi-independent market protected by transport costs, ignorance or goodwill of the buyers. Under such conditions, it may be to the advantage of the community if the industry is concentrated in the hands of a smaller number of firms. If their number is reduced, each firm will become optimum with larger output and lower costs and price.

This brings us to the wastes of imperfect competition.

7. Wastes of Imperfect Competition. Some other evils, besides those noted under monopoly, are associated with imperfect competition. Superficially, these are sometimes considered "wastes of competition" but they can more fitly be described as "wastes of monopolistic conditions"[1] or of imperfect competition. Those are mostly due to what are technically called irrational buyers' preferences *i.e.*, buyers' preference of a commodity or a shop due not to any real differences in quality but to irrational factors like habit, prejudices or ignorance. Some of these cases are given below.

(*a*) Expenditure on competitive advertisement is usually regarded as a waste of competition. In fact it is due not to perfect but imperfect competition, If competition is perfect, there is no need for such expenditure to be incurred, because then each firm can extend its sales by lowering its price only a little. Under imperfect competition, much larger reduction of price will be necessary to overcome the irrational preference of the consumers. It pays, therefore, to spend money on advertising and thus persuading the consumers that the product of the advertising firm is better than that of its rivals. Such expenditure is a waste from the point of view of the community.

(*b*) Another similar waste is 'expenditure' on cross-transport. A firm in the north of India may be selling a commodity to the consumers in the south. At the same time, the same (or substantially the same) commodity is perhaps being sold by a firm located in the south to consumers living in the north. This state of affairs is also due to the absence of perfect competition, which in its turn is due to irrational buyers' preferences. If competition were perfect, the firms in the north would have attracted all the buyers in the north and the firm in the south all the buyers there, by slightly lowering the price. This would have saved the cost of transport. As it is, the firms deem it worthwhile spending considerable sums on advertisement and transport cost, rather than reduce the price sufficiently to attract the neighbouring consumers with irrational preferences.

(*c*) A third waste of imperfect competition is the failure of each firm in an industry to specialise in the production of those things for which it is best suited. Under perfect competition, such a specialisation would naturally take place, provided it led to any real economies. Under conditions of imperfect competition, since each firm has to spend money on advertisement or to sell at considerably lower prices in order to attract customers from its rivals, "each firm may find that it pays it better to produce varied assortment of types and qualities to sell to its own particular customers, rather than face the cost of attracting a large number of customers for one type of product alone."

(*d*) Still another waste of imperfect competition has already been noted. This is that, under such conditions, the efficient firm which can produce at lower cost may fail to drive out the inefficient firms as would happen if competition were perfect. If competition is perfect, the efficient firm (or firms) will increase output until the price comes down to the marginal cost of production at which the inefficient firms will not be able to supply. But if competition is imperfect and the efficient firm has to spend considerable sums to attract consumers from inefficient rivals, or it has to lower its price considerably to achieve the same end, it might prefer not to drive out the inefficient firms even though the latter were charging prices higher than the marginal cost of the efficient firm.

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[1] Meade—*Economic Analysis and Policy*, pp. 165-68.

(*e*) Finally, imperfect competition may prevent that standardization of commodities which is essential if the most efficient methods of production are to be adopted. Different types of cars may be produced by a large number of firms each at a high cost of production. If only a few designs were produced, cost per unit could be lowered considerably due to the economies of large-scale production. Under perfect competition, such large producing units would emerge. Under imperfect competition, no producer would take the risk of producing any particular design on a large-scale since the cost of attracting buyers from his rivals would outweigh the economies of scale obtained by producing the larger output.

8. Duopoly and Oligopoly. We have so far discussed a situation where a single monopolist, an individual or a single group of individuals, dominates the entire market. But other situations may arise in the real world. One is that there may be two monopolists instead of one who share the monopoly power. This is called *Duopoly*. The other is when more than two or a few sellers are found in a monopolistic position. This is called *Oligopoly*.

Oligopoly differs from monopoly and monopolistic competition in this that, in monopoly, there is a single seller ; in monopolistic competition, there is quite a large number of them : and in oligopoly, there is only a small number of sellers.

Under *duopoly*, the monopolists are supposed to be selling an identical commodity and there is no product differentiation. Very likely there will be a collusion between the two. They may agree on a price, or assign quotas or divide the territory in which each is to market his goods. This will specially be the case if their respective cost curves are identical or nearly so and if the demand is stable and less elastic. Obviously this collusion creates conditions almost analogous to a monopoly and the price determination will be similar to that under monopoly.

In case, however, there is no agreement between the two, a constant price war will be the most probable consequence. The important factors to be considered are the costs and gain in driving out the rival, the relative sizes of the two firms, the demand elasticity and mobility of purchasers, the promptitude with which the rival reacts to changes in the other's policy and the extent to which price concessions can be kept secret, and so on.

If there is no product differentiation and goods are identical, the consumers are indifferent between the two producers and same price must be charged by both in the long run, otherwise the one charging more will not be able to sell any. They must fix a price as if they were a single monopolist rolled in one. Only in that way they will be maximising profits. In case there is a rate war between them, they will be able to earn only normal profits as under perfect competition. If their costs are different, the one with lower costs will squeeze out the other and a simple monopoly established. The best course for the duopolists will be to fix the monopoly price and share the market and profits. It is possible that, in the short run, duopoly price may be lower than the competitive price, none of the producers earning normal profit. In the long run, this price may be somewhere between the monopoly price and the competitive price.

When there is product differentiation, each producer has his own clientele and goodwill. There is no fear of immediate retaliatory measures by rivals if one producer changes his price-output policy. There is less danger of price-war. There will be no agreement between them. Since products are not similar. the firm with better products can earn supernormal profits.

Under *Oligopoly*. the pricing theory is fundamentally the same with this difference that the larger the number of firms the greater will be the differences in marginal costs and more remote will be the possibility of collusion or agreement whether tacit or explicit. The element of predictability as regards the proper scale of advertisement, research investment and returns is almost missing. The temperaments of entrepreneurs, whether pessimistic or optimistic, make the situation still more complicated and obscure. Since they all deal in a standardised product and each is producing a considerable portion of the total output, the price and output policy of each is likely to affect the other appreciably, but none can foretell precisely how. "The price which will be fixed in oligopoly without product differentiation is thus indeterminate, but is likely, in general, to be lower. the larger the number of producers, until in the end there are enough for a perfectly competitive equilibrium to be reached."

In case there is product differentiation, monopoly agreements are even less likely. Since products are not similar, any producer in oligopoly can raise or lower his price without any fear of losing customers or immediate reactions from his rivals. Cut-throat competition is unlikely. However, keen rivalry among them may create conditions of monopolistic competition. The price, in the long run, may settle at a level between the monopoly price and that in cut-throat competition.

Under oligopoly, the nature of demand for the product of a firm has one peculiarity. For a price above the current price, it is elastic and, for a price below the current price, it is less elastic. If it raised the price, it will lose a considerable portion of its market to its rivals in the industry, and if it lowered it, the volumes of sales will increase but not so much since its rivals will also lower their price. Also, no firm, in oligopolistic industry, can capture the market by lowering the price, for competition is imperfect.

Another thing noticeable is that price under oligopoly is more stable. It is neither much responsive to changes in demand nor to the changes in supply. For instance. if demand increases, no firm will venture to raise the price for fear that other firms may not raise the price and it may lose the market. Nor will it lower the price for the fear that the other firms may also lower their price and deprive it of any initial advantage.

Similarly, changes in costs, too, do not much affect price and output under oligopoly. For instance. if wages have gone down, each firm may like to reduce the price but it is not sure if others too will not lower their's. In competitive industry, action of no single firm can affect the conditions in the industry for the number of firms is very large. But under oligopoly, the number of firms is very small and any step taken by any one firm is likely to produce some reaction on the others. As Tarshis remarks, "Thus it is quite possible for demand and cost to change frequently and yet to produce no changes, or at any rate very few changes, in price. Thus the existence of oligopoly accounts for some of the price inflexibility that characterises our economy." The oligopolist avoids experimenting with price-changes. He knows that if he raises the price, he will lose his customers and if he lowers it he will offend his rivals. He has a clientele of his own when there is product differentiation. Why should he experiment ? He is, therefore, content to leave price and output as they are.

9. Pricing of New Products[1]. Pricing a new product is all a leap in the dark. Experienced manufacturers, however, do not take a blind plunge but proceed in a scientific manner. A new product has to traverse various stages in the market. The benefit of initial novelty gradually wears down and the product loses its distinctiveness. "New products have a protected distinctiveness which is doomed to progressive degeneration from competitive inroads." The different stages have been thus described : "The invention of a new marketable speciality is usually followed by a period of patent protection when markets are still hesitant and unexplored and when product design is fluid. Then comes a period of rapid expansion of sales as market acceptance is gained. Next the product becomes a target for competitive encroachment. New competitors enter the field, and innovations narrow the gap of distinctiveness between the product and its substitutes. The seller's zone of pricing discretion narrows as his distinctive 'speciality' fades into a pedestrian 'commodity'." A price policy appropriate to each stage has to be shaped.

The main tasks before the entrepreneur are :

(*i*) *To estimate demand.* Consumers' preferences, actual and potential, have to be explored. Some of the questions that have to be inquired into are whether the product will cut any ice at all, what range of price will make it attractive, what sales can be expected at various prices and what reaction will these prices produce on the manufacturers of displaced substitutes.

(*ii*) *To decide on market targets.* These targets will depend on the share of the market it is intended to capture, production methods and possible distribution channels. The behaviour of production and distribution costs will be the determining factors.

(*iii*) *To design promotional strategy.* Heavy initial expenses incurred in building up the market and goodwill must be recovered before the manufacturer's pricing discretion evaporates.

(*iv*) *To choose distribution channels.* The selling costs must also be taken into account in pricing the new product.

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[1] *See* Joel Dean, *Harvard Business Review*, November 1950, pp. 45-52, reprinted in Hess and others—*Outside Readings in Economics*, 1951, Ch. 15.

Let us consider the pricing process in the two main stages through which the commodity has to pass : (*a*) poineering stage, and (*b*) stage of maturity

(*a*) *Pioneering pricing*. In the pioneering stage, two courses are open to the manufacturer: (*i*) High price known as the *Skimming* price, and (*ii*) Low price called the *Penetration price.*

The skimming price is intended to skim the market before it is invaded by rivals. It is suited to the products which represent a drastic departure from the existing commodities and which requires a heavy promotional expenditure in the early stages. In favour of a high price, it can be said that at first demand is relatively inelastic and that it can skim the cream of the market which is relatively insensitive to price, that it is safer and that high price provides the wherewithal or financing initial heavy expenditure on production and distribution and promotional investment.

The penetration price, which is a low price, represents a direct assault on the whole market and is expected to bring large profits from the turnover. The low price is suitable where there is high price-elasticity of demand in the short run, where there is a strong threat of potential competition and where the product can easily fit into the consumers' expenditure pattern. The larger volume of output called to meet heavy demand at low price will mean substantial savings in production costs.

The manufacturer must carefully weigh the relative advantages and disadvantages of skimming *vs.* penetration price and decide his course of action.

(*b*) *Pricing in maturity*. Some of the symptoms of degeneration of the competitive status of the new products are the weakening in brand preferences, narrowing physical variation among products as production becomes standardized, the entry in large numbers of private-label competitors, the market saturation and the stabilization of production methods. When these symptoms appear and the manufacturer finds his market slipping, he must cut down the price and thus raise effective barriers in the way of potential rivals. He should also concentrate on product improvement and market segmentation to put the product "in the elite category with an appeal to the top-income brackets". The choice then is really between low and not-so-low a price.

10. Importance of the Margin.[1] We had occasion to refer to marginal analysis. But the marginal analysis is important in other parts of economic theory too. The concept of the margin has a very great importance in economic theory. Its importance lies in that "it is only at the margin that any of those shiftings can occur by which the changed relations of demand and supply manifest themselves. It is at the margin that business failures and bankruptcies occur and financial ruins are registered, and it is at the margin again that new firms and enterprises take their rise. Substitution also takes place at the margin........Decisions as to the distribution of means between gratification of different wants in primitive society, the distribution of income among alternative objects of consumption in a money economy and also the distribution of money as between present and future are all taken at the margin.'' In the words of Wicksteed, "Everywhere hath she (margin) away ; there is her imperial throne. It is there that the direction of human efforts is put to economic tests and thence that signals are flashed back all along the line, stimulating and checking the distribution of resources at every point of division.''

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[1] Richard A. Lester—"Shortcomings of Marginal Analysis", *The American Economic Review*, March, 1946, pp. 72-82, reprinted in Hess and others—*Outside Readings in Economics*, 1951, Ch. 18.

The concept of the margin is of special importance in relation to output. *It is the determining factor in fixing the size of the output.* In deciding how much to produce, the producer does not consider the average cost of production but the marginal cost of production. It is more important for him to consider how much more he will have to spend if he increases the output. He will compare this additional expense with the anticipated additional income from the extra output. The rule which will guide him is the equating of the marginal costs with the marginal revenue or the price.

Every firm, producing under competition, will have the same marginal cost because price is the same for all. The inefficient firms will stop producing earlier, for their marginal cost will soon overtake price, whereas the efficient ones will have a larger output and then their marginal cost will come up to the price.

At a point where marginal cost equals marginal revenue profits are maximized (or losses are minimized). So long as marginal revenue exceeds marginal cost, output will be expanded because then more will be added to total receipt than to total costs. But where marginal cost exceeds marginal revenue, the output must be contracted, because then total receipts will be reduced less than total costs. Under perfect competition, price for each individual seller is fixed at which he can sell any amount he wishes without bringing down the price. Hence marginal revenue and price are identical.

It may be pointed out that the marginal buyer or seller is not of any particular importance. He is one out of so many. Every buyer or seller counts. Price is determined by the aggregate demand and supply. The margin only *indicates* value and does not *govern* it.

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CHAPTER XXIV

DISTRIBUTION : GENERAL PRINCIPLES

1. **Introduction.** We have now covered the three branches of economics. *viz.*, Production, Consumption and Exchange. We shall now take up the fourth branch. *viz.*, Distribution. By "distribution" in the present context, we do not mean the distributive activities of traders and middle men. "The economics of distribution," says Chapman, "accounts for the sharing of the wealth produced by a community among the agents, or the owners of the agents, which have been active in its production."[1] From another point of view, the theory of distribution is concerned with the evaluation of the services of the factors of production, a study of the conditions of demand for and supply of the units of these factors and the influences bringing about changes in their market price. In this sense, the theory of distribution is mostly an extension of the theory of exchange (or value).

In a primitive society, the productive process is so simple that all the factors are supplied by one and the same individual. The question of distribution, therefore, does not arise, or at any rate, does not require much explanation. But as production becomes complex and the various agents achieve specialisation, they have to be drawn from different sources and must be paid their due remuneration. It becomes also difficult to attribute any particular portion of the product to any particular factor. The problem becomes complicated and requires careful study.

It may be pointed out that the distribution discussed here is *functional and not personal.* It is distribution not among individuals but among agents of production. The same person may represent in his person all the four agents, *e g.*, a peasant proprietor. Distribution takes place through the agency of the entrepreneur. He purchases their services and the reward that each agent gets is the price for his services paid by the entrepreneur.

2. **Need for a Separate Theory.** In exchange, we studied the theory of value, *i.e.*, the theory according to which the value of a commodity is determined. Cannot the same theory explain the value of the service rendered by an agent of production ? No, a separate theory is essential. Marshall justifies the need for a separate theory of Distribution on the ground that "free human beings are not brought up to their work on the same principles as a machine, a house. or a slave." "If they were," he continues. "there would be a very little difference between the distribution and the exchange side of value ; for every agent of production would reap a return adequate to cover its own expenses of production with wear and tear etc., at all events after allowances had been made for casual failures to adjust supply to demand."[2] Actually, however, not only

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[1] *Outlines of Political Economy*, p. 278.

[2] *Principles of Economics*, 8th Ed., p. 504.

human beings but other factors of production, like land, are subject to peculiar conditions, especially of supply. We cannot, for instance, speak of the marginal cost of production of factors of production in the same sense as when we use this term in relation to ordinary commodities. Land, for example, is a gift of nature. Its total supply is fixed and once all the land has been brought under use, the supply cannot be increased, however attractive the reward for its services. It has no *cost of production* in the sense that, for instance, radio sets have. Capital can be increased, but its supply price does not depend upon its marginal cost of production in the same sense as does that of the other commodities. As for labour, what can be the marginal cost of production of a human being ? Human beings are not produced on business considerations. The same is true of enterprise.

Thus the Thoery of Value, which explains the determination of the value of *commodities*, is not applicable in its entirety to the determination of the value of *services i.e.*, in the determination of the share of the various agents of production out of the National Dividend. In two respects the two theories, *viz.*, the Theory of Value and the Theory of Distribution, resemble : (1) On the demand side, the value of both commodities and services is determined by marginal utility or marginal productivity ; and (2) the immediate effect on value of a change in supply is also similar, *viz.*, increase in supply will decrease its value, and *vice versa.*

There are, however, important differences on the supply side, especially as regards the effect of price on supply. In the case of a commodity, if the price goes up, supply tends to increase to take advantage of the prevailing high price. But this cannot happen in the case of an agent of production. If, for example, rent or wages go up, the supply of land or labour may not increase. Thus the supply of an agent of production does not quickly react to the changes in its reward. The supply of an agent cannot as readily be adjusted to the changes in demand as that of a commodity.

Further, the cost of production of an agent of production cannot be ascertained. As a matter of fact it looks rather odd to speak of cost of production in the case of an agent of production say labour. What can you say about the cost of production of a worker or of an acre of land ? Hence, though in the case of commodity, we may say that value in the long run tends to approximate to the cost of production, yet such approximation is out of the question so far as an agent of production is concerned for the simple reason that the cost is not ascertainable.

In spite of these qualifications, the general theory of demand and supply does apply to agents of production also. But since it requires essential modifications, it is necessary to have a theory of distribution distinct from the theory of value.

3. The National Dividend. Let us first know what it is that is to be distributed. It is national dividend or national income which is to be distributed along the co-operating agents. National Dividend has been variously defined. *National dividend is at once the aggregate net product of, and the sole souce of payment for, all the agents of production.*" It consists of both commodities and services and is equal to the aggregate *net* product *i.e.*, what remains after providing for replacements and maintenance costs. In Marshall's words : "*The labour and capital of a country acting on its natural resources produce annually a certain net aggregate of commodities material and immaterial, including services of all kinds. This is the true annual income or revenue of the country or national dividend.* According to Pigou "*National Dividend is that part of the objective income of the community, including of course income derived from abroad, which can be measured in money.*"

Thus, according to Pigou, in estimating the national dividend, only those goods and services should be included which are exchanged in the market. This definition would exclude the services that one renders to oneself, to members of one's family or friends without payment. Similarly, free benefits derived from public property like parks and toll-free bridges will also not be counted. This definition is a very narrow one. Moreover, it gives rise to paradoxes. One is mentioned by Pigou himself. If a man marries his house-maid, the national dividend is diminished ! This is so because he has no longer to pay for her services though the same services continue to be rendered.

National income may be defined as the aggregate *factor income* (*i.e.*, earning of labour and property) which arises from the current production of goods and services by the nation's economy. The nations economy refers to the factors of production (*i.e.*, labour and property) supplied by the *normal residents of the national territory.*

The national territory is the territory lying within the customs frontiers of the country concerned. All other territory constitutes the rest of the world in relation to the given country. This definition of national territory is. however, subject to a few qualifications. Ships sailing or aeroplanes flying under the national flag of a given country should be considered as part of the national territory of that country even while in the territorial waters of another country or in the air above it. Similarly ships and planes under a foreign flag should be considered as part of the rest of the world even while in the territorial waters of the country concerned or in the air above it. Embassies, official missions and the armed forces of given country located abroad should be considered as on the national territory of the given country unlike foreign embassies, official missions and armed forces located in the national territory of the given country which should be treated as within the rest of the world in relation to it.

The normal residents are those whose principal residence is located in the national territory of the country concerned. The tourists of a given country travelling abroad are considered normal residents of that country, but citizens of a given country who usually live abroad are not. The official representatives of a given country serving in a foreign land are to be treated as normal residents of the given country.

The income is deemed to *originate* on the territory on which the income-generating economic activity takes place. The income originating on the territory of country is described as its *net geographical or domestic product.* Since a part of the factor-income originating on the territory of a given country may accrue to foreigners because of their ownership of such income earning factors, and a part of the factor-income originating on foreign territories may for the same reason accrue to normal residents of the given country, national income is different from net domestic product; it is equal to net domestic product plus net income from abroad, the latter being the excess of the factor-income originating abroad but accruing to the normal residents of the country over the factor-income originating in the given country but accruing to normal residents of the rest of the world.

Since factor-*incomes* arise from production of goods and services and since these incomes are *expended* on goods and services produced, three equivalent definitions of goods and services are possible. First, national income is defined as the *sum of distributive shares*, *i.e.*, as the aggregate of income payments in a specified period to the factors of production supplied by the normal residents of the national territory. Secondly, it may be defined as *net national products*, *i.e.*, as the aggregate net output of goods and services which become available for consumption or capital formation to the normal residents of the national territory in a given period. In this form it is measured by "the aggregate of the net values added in all branches of economic activity during a specified period, together with the net income from abroad." Finally, it may be defined as the net national expenditure, *i.e.*, as the sum of expenditures on final consumption plus domestic and foreign investment by the normal residents of the national territory during a given period. The given period usually is a year. When thus presented, the components of national income are personal consumption expenditures, gross private domestic investment, net foreign investment and government purchase of goods and services. The total of these four items gives the Gross national product at market prices. Deducting capital consumption (depreciation and obsolescence) and indirect taxes (minus subsidies) from this total we get net national income.

4. Measurement of National Income. The three definitions of national income given above provide three alternative methods of national income measurement. The first method is "to sum up the value of the gross product (sales *plus* self-consumption *plus* increase in stocks) of all producers and to deduct from this total the purchases of these producers from other producers, the depreciation of equipment used in the process of production". The value of a producer's gross output less the value of the intermediate products consumed and the depreciation of equipment during the production process gives the net value added by him or his contribution to the total value of unduplicated production. A net figure of this kind may be estimated for each individual industry. The sum of estimates would give net domestic product at factor cost. The addition of net income from abroad to this aggregate would give net national product or national income at factor cost. This is known as the *product method* of national income estimation.

The second method in to sum up the incomes that accrue to the factors of production provided by the normal residents of the national territory, *i.e.*, to add up wages and other labour incomes, interest, rent and income of unincorporated enterprises (net income earned through mere changes in the stocks of goods held). This procedure is described as the *income method* of national income measurement.

The third method is to add up the market value of the final products available for consumption and investment and to make the adjustments required to reduce gross national product at market prices to net national income at factor cost, *i.e.*, by deducting indirect taxes net of subsidies.

5. Difficulties of Measuring National Income. The measurement of national income, especially in an under-developed country like India, is beset with several difficulties, conceptual as well as statistical. The more important of these are :

(*a*) To the extent output is not exchanged for money being either consumed by the producers themselves or bartered for other commodities or services, there arises the problem of deciding what to include in national output and what value to impute to it.

(*b*) To the extent business is undertaken by unincorporated enterprises, accounts are unlikely to be kept in a form as would facilitate estimation of the quantity of value of output. It is only in State or corporated enterprises that such information is readily available.

(*c*) Since the output of one industry often serves as the input of another industry so that its value reappears in the output of the latter also, there is the problem of eliminating double counting which greatly complicates the valuation procedure.

(*d*) The available data are seldom comprehensive, accurate and up-to-date enough for the purpose of a precise estimation of national income.

(*e*) Where (as in India) over a considerable portion of the economy, there is lack of specialization of functions, a precise classification of national income by industrial origin is rendered impossible.

6. The Theory of Marginal Productivity. The entrepreneur buys the services of the various factors. He is the agent through whom the various factors get their rewards in the form of rent, wages, interests, etc. The entrepreneur, in employing the various factors of production, acts according to the principle of substitution. He substitutes one factor for another till the marginal productivities of all the factors are equalised. This will be the most economical combination which yields him the maximum profit. What is marginal productivity ?

By the marginal productivity of a factor of production we mean the addition made to total production by the employment of the marginal unit, *i.e.*, the unit which the employer thinks just worthwhile employing. At the margin of employment, the payment made to the factor concerned is just equal to the value of the addition made to the total production on account of the employment of the additional unit of a factor.

Also, factors of production tend to move from those uses in which their marginal productivity is low to those in which it is high. Thus

a given supply of a factor of production is distributed in such a way that its marginal productivity is equal in all the uses.

Thus in a position of competitive equilibrium : (*i*) the marginal productivity of a factor of production is the same in all employments, (*ii*) the marginal productivity of a factor of production is measured by the price of the factor of production, and (*iii*) marginal productivities of various factors are proportional to their respective prices.

Over the whole field of employment, therefore, each factor of production tends to be paid in proportion to its marginal productivity. Thus the distribution of National Dividend is not a scramble as the strikes or lock-outs make it appear to be It is governed by a definite economic principle.

It should be noted that for any individual employer working under competition, the prices that he has to pay for the factors of production are already determined. Since his demand for the factors of production is only an insignificant proportion of the total demand, his employing more or less of the factors does not appreciably affect their prices. What he does is to push the use of each of the factors to such a point as to make its marginal productivity equal to its price as already determined by the market forces. The price of a factor of production is determined by the marginal productivity not of any particular employer but of employers in the aggregate

The theory, explained above is true only under certain assumptions. *First,* it assumes that all the units of a factor are homogeneous, so that any one unit is as good as any other. *Secondly,* that different factors are capable of being substituted for one another, so that, at the margin, it is possible to use a little more land or a little more labour or capital etc. If this substitution is not possible marginal productivity of the various factors may remain unequal. *Thirdly,* it is also assumed that the amount of a particular factor that is used can be continuously varied, so that it is possible to apply a little more or a little less of the same factor. If this cannot be done, the use of the factor cannot be pushed to the point at which its marginal productivity becomes equal to its cost *Fourthly,* it is assumed that the factors of production are mobile as between various uses. If a factor cannot be moved from one use or employment to another, its marginal productivity in the various employments may remain unequal. *Lastly,* the theory is based on the law of diminishing returns as applied to the organisation of a business. This means that, other things being equal, a disproportionate increase in the supply of any one factor increases total production at a diminishing rate.

It is under these assumptions that the reward of each of the four factors of production, *viz.*, rent of land, interest on capital, wages of labour and profits of enterprise tends to equal the value of its marginal net product.

7. Pricing of Productive Services[1]. In distribution, we are concerned with the pricing of productive services There is a circular relationship between markets for consumers' goods and for productive services. The consumers buy consumers' goods and, as owners of productive services, sell productive services. Entrepreneurs, on the other hand, buy productive services and sell consumers' goods. The fundamental laws of supply and demand apply in this case also.

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[1] *See* G. J. Stigler,—*Theory of Price,* 1947, Ch. 10.

On the demand side. the governing principle is that "the demand curve of a competitive firm is equal to the curve of the value of the marginal product of that service." Owing to diminishing marginal product this is a falling demand curve. If each productive service is paid the value of its respective marginal product, the total product will be exactly sufficient to remunerate all the productive services employed.

The following four rules may be noted in connection with the demand for a productive service[1] :—

(*i*) The demand price for a given quantity of productive service will generally be higher, the greater the quantities of co-operating productive services.

(*ii*) The demand price for a unit of a productive service is lower, the more of the service is employed.

(*iii*) The demand price for a productive service will be greater, the more valuable the finished product in which production it is used.

(*iv*) The demand price of a given quantity of a productive service is higher, the more productive the service.

The demand curve of the industry is the sum total of the demand curves of the individual firms. By a similar summing up, we can have the demand curve of all the industries using a particular productive service.

The supply curve of a factor depends on the various conditions of its supply. For example, if we consider labour— a very important productive service—, it will depend on the total population, its occupational and geographical distribution, labour efficiency, cost of education and training, costs of movement, the expected income, relative preference for work and leisure, and so on. In this manner, by considering relevant factors, it is possible to construct the supply curve of a productive service.

When we have constructed the two curves, the demand curve and the supply curve, the determination of price follows the usual process. It is a result of equilibrium between these two forces that the market price of a productive service will be determined.

8. Criticism of the Marginal Productivity Theory.

Even under these assumptions mentioned earlier, the marginal productivity theory has not been universally accepted by economists. The important points of criticisms may be noted :

One common criticism is that a product is the result of the co-operative efforts of all the factors of production and that it is impossible to separate the share contributed by each. This criticism advanced by Taussig and Davenport is obviously based on a misreading of the concept of marginal productivity. As we have already explained, marginal productivity is not the net product solely due to the marginal factor. We merely impute that product to the factor on the margin of use. It is the net addition made to the total production by the employment of this additional factor or deduction caused in it if this factor were withdrawn.

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[1] *Ibid.*, p. 182.

(*ii*) Another attack is made by Hobson. It is held that if any particular factor unit is withdrawn, the whole business will be so disorganized that the loss to production will be much more than the productivity of the unit withdrawn. This criticism is also due to the wrong application of the theory. The attention is fixed on a small business organisation and large units of factors. If we conceive of a large business and small units of factors, it will be clear that withdrawing a unit at the margin will not appreciably affect the productivity of the other factors.

(*iii*) Then there is the opposite view according to which the sum of the marginal net products of all the factors will be less than the total product, the surplus being due not to any particular factor but their co-operation. Wicksteed has answered this criticism. He assumes that the increase of all the factors will increase the quantity of the product in the same proportion. But this assumption, which implies that the industry obeys the law of constant returns, is not always valid and introduces certain difficulties.

(*iv*) Another serious difficulty which relates to the measurement of the marginal net product has been pointed out by Joan Robinson,[1] Pigou[2] and J.R.Hicks.[3] It is argued that when there are economies of large-scale production, the marginal productivity of a unit of a factor to a particular firm will be considerably less than that to the industry as a whole. This is so because when an additional unit is made available to an industry it brings about a greater division of labour. But, when the industry has adjusted itself to the new supply, it is quite possible that the marginal productivity of a factor to an individual firm is less than that to the industry as a whole. This is so because its withdrawal will mean a much greater loss to the industry than to an individual firm. In such industries, therefore, marginal productivity of a factor is indeterminate.

(*v*) Hobson thinks that it is not possible to vary the use of factors in most cases. The proportion in which factors are used is determined by technical conditions of the business, the existence of fixed capital like machinery, etc. Many a machine, for instance, would require only one labourer, two would be uneconomical, and so on. Since we cannot vary the use of a factor how can we determine its marginal productivity ? To this it is replied that, in general, there are infinite possibilities of variations in the proportion in which different factors are combined.

(*vi*) Finally, it is objected that the theory assumes that supply of a factor is fixed. In actual practice, the reward enjoyed by a factor does affect its supply. The theory only approaches the problem from the side of demand.

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[1] *The Economics of Imperfect Competition*, p. 327.

[2] *Economics of Welfare.*

[3] *The Theory of Wages.*

(*vii*) It should be remembered that the theory is only valid under the assumption of perfect competition. In real life, since competition is not perfect, actual rewards paid to the factors of production do not conform to their relative marginal productivities. Moreover, this explanation of the determination of the shares of the various factors of production, in a capitalistic economy, should not be regarded as a justification, from the ethical point of view, of the system of distribution under such a system.

As Samuelson remarks, "It (marginal productivity theory) is not a theory that explains wages, rents, or interests ; on the contrary, it simply explains how factors of production are hired by the firm, once their prices are known."[1]

The theory is essentially *positive and not normative*. It does not say that the reward of a factor according to marginal productivity is a just reward.

Commenting on the theory of distribution, Fraser remarks, "No economist would claim that the theory is as yet complete, even as a purely academic structure or framework. It has the defects of its qualities. Being simple and self-consistent it is abstract and impersonal... It is guilty of sins both of omission and commission ; its postulates are unduly rigid and narrow."[2]

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[1] *Economics*, 1948, pp. 526 nd 528.

[2] *Economic Thought and Language*, 1947, p. 354.

CHAPTER XXV

RENT

1. Meaning of Rent. In the last chapter, we studied the general theory of distribution. Now we shall take up the share of each factor of production separately. Let us first analyse rent, the reward of the first factor of production, *viz.*, land.

What is rent ? In ordinary speech, the term 'rent' is used in a wide sense to mean a hiring charge, *e.g.*, rent of a house, a tonga or a machine. But, in Economics, rent, or *economic rent* as it is called, is used in a special sense. It refers only to that part of the payment by a tenant which is made *only* for the use of land (*i.e.*, free gift of nature). The payment that an agriculturist tenant makes to the landlord is not necessarily equal to this economic rent. A part of this payment may consist of interest on capital invested in the land by the owner in the form of buildings, fences, drainage, wells, etc. That part of the payment which is made for the use of land *only* is economic rent and the total payment made by a tenant to the landlord is called *contract rent*.

In Economics, rent is increasingly being used in the sense of a *surplus*, *i.e.*, what a factor of production earns over and above what is essential to maintain its supplies in its present occupation. It can be easily understood that rent in this sense can arise only when the supply of a factor of production is less than perfectly elastic, and this is the case with most of the factors. In case the supply of a factor is perfectly elastic, it cannot earn any surplus over and above its supply price, because whenever such a factor is found to be earning more than its supply price, more units of this factor will rush in and the surplus earnings will disappear. This is so because under perfect competition the market price of a factor must equal its supply price.

But when supply is not perfectly responsive to changes in the reward of a factor, it can continue to earn more than what is necessary to call forth its supplies without any fear of new units of factors coming in to deprive it of extra reward. The supply of land in general, though not for a particular use, is absolutely inelastic ; and as such, its supply is independent of what it earns. Higher rent cannot attract more of it and lower rent cannot drive it out. Its supply price being zero, the whole of its earnings is called rent in the economic sense. Economic rent is the surplus which remains to the cultivator after he has paid all the expenses of production and has remunerated himself for his own productive effort. It is an excess or surplus over costs or expenses. How this surplus arises is explained in the following section. It is for this reason that the use of the term rent is commonly associated with land, although as defined here, the concept of rent is applicable to all factors.

We have said above that, *from the social point of view*, the whole of the earnings of land (and of other free gifts of nature) can be termed rent because land has no supply price, or its cost of production is zero. Why then is any payment made for the use of such factors of production ? This is simply due to the fact that they are scarce in relation to demand for them. *How does rent arise* ? More than a century ago David Ricardo supplied an answer in the theory of rent associated with his name.

2. Ricardian Theory of Rent. Ricardo defined rent as follows :—

"Rent is that portion of the produce of the earth which is paid to the landlord for the use of the *original and indestructible powers* of the soil. It is often, however, confounded with the interest of capital, and in popular language, the term is applied to whatever is usually paid by a farmer to his landlord."

Economic rent, according to Ricardo, is the *true surplus left* after, the expenses of cultivation as represented by payments to labour, capital and enterprise have been met.

How this surplus arises may be illustrated by an example. Suppose in a country there are four kinds of land—A, B, C and D. Some pieces of land are more fertile than others; some areas are more advantageously situated as regards centres of population and means of transport, etc. But taking all the factors into consideration, let us suppose that we have four categories of land as mentioned above, so that land A is the most superior and B, C and D are 2nd, 3rd and 4th grade lands, respectively. Further, suppose that standard units of labour and capital, called "doses" of labour and capital, when applied to these categories of land, produce wheat as given in the table below :

Doses of labour and capital	Return in maunds of wheat per acre			
	A	B	C	D
1st ...	15	14	13	12
2nd ...	14	13	12	11
3rd ...	13	12	11	10
4th ...	12	11	10	9
5th ...	11	10	9	8
6th ...	10	9	8	7

If there is enough land of class A, so that by putting one dose of labour and capital per acre into this land, the whole of the demand for wheat can be met at the prevailing price of wheat, the land will command no rent. It will be like a free gift of nature.

Now suppose the population increases to such an extent that the whole of the class A land is brought under cultivation, and still it is not enough to meet the growing demand, More labour and capital will be put into lands of class A, and lands of class B will also be brought under cultivation. This will happen only when the price of wheat rises so much as to make it worthwhile putting the second dose of labour and capital into lands A or first dose of labour and capital into lands B. In other words, in our chart above, 14 maunds of wheat must sell for as much as is the cost of a dose of labour and capital. On lands of class A, therefore, two doses of labour and capital give a return of 15+14=29 maunds of wheat. But only 14×2=28 maunds of wheat are enough to pay for the two doses. One maund of wheat is the surplus on land A. Cultivators of land can either cultivate B class lands free of rent and get 14 maunds of wheat per dose of labour and capital per acre, or they can pay one maund of wheat (or its equivalent in money at the prevailing price) per acre to the owners of lands A as rent and obtain 14 maunds of wheat per dose of labour and capital as their share. If there is perfect competition, this rent (*i.e.*, one maund per acre) for A class lands is bound to be established.

As the demand for wheat still grows and the price rises, this process will continue. More and more units of labour and capital will be applied to the superior lands on the one hand, and still inferior lands will be brought under cultivation on the other. The available dose of labour and capital will be applied in such a way as to get equal returns at the margin of cultivation. For instance, if there are 14 doses available, 5 will be applied to land A, 4 to land B, 3 to C and 2 to land D. In this way, the marginal or the last dose applied to each class of land will give the same return, *i.e.*, 11 maunds of wheat. The total production under these conditions will be 65+50+36+23=174 maunds of wheat. No other arrangement will give more than this total. These doses will be applied only if the price of wheat is such as to make only 11 maunds of wheat enough to meet the cost of application of doses of labour and capital.

Under such circumstances rent per acre of the various kinds of land will be :

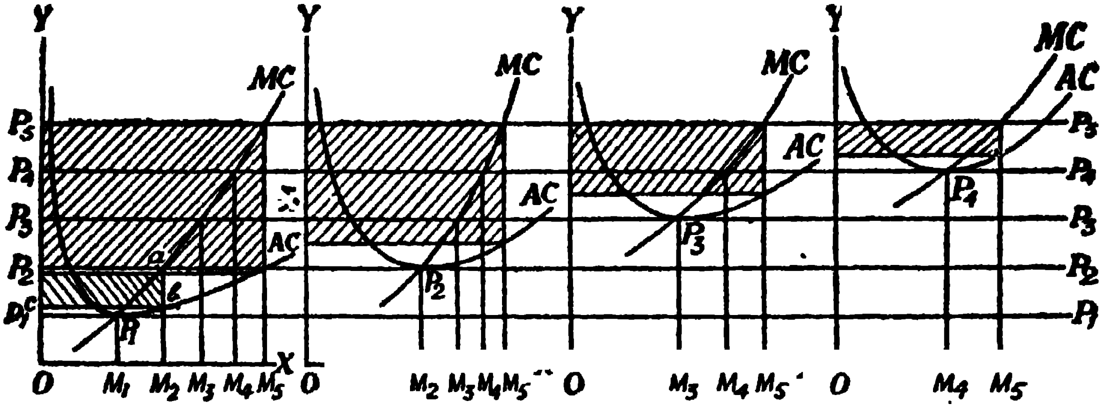
Rent of A grade= (15+14+13+12+1)—(11+5)
= (total produce)—(total cost)
= 65—55= 10 maunds
Rent of B grade= 50—44= 6 ,,
Rent of C grade= 36—33= 3 ,,
Rent of D grade= 23—22= 1 maund.

We have calculated the rent in terms of the produce. It can be easily converted into money value at the prevailing price of the produce.

Marginal or no-rent land. When the marginal produce is 11 maunds, all the four types of land in our illustration pay rent. When it is 12 maunds, land D pays no rent. It s then the marginal land or land on the margin of cultivation. This is also called the "no-rent land". It produces no surplus over cost of production. Its produce is just enough to cover the expenses of production on it. The rent of all superior lands is measured upwards from, and with reference to, this land.

Now the marginal land may not be the poorest or the worst land. We have not to look to the quality of land but to its best alternative use. The marginal land, *i.e.*, the land on the margin of transfer, may be the best land. The land which is best for the cultivation of cotton may also be the best for the cultivation of wheat. If the price of cotton falls, it is this land which will be first diverted to wheat, and will, therefore, be marginal from the point of view of cotton. This may be considered the modern version of marginal land.

The following four figures show how rent arises. Fig. (*i*) represents the best land, *i.e.*, the A-grade land ; Fig. (*ii*) the B-grade land, Fig. (*iii*) the C-grade land and (*iv*) D is the least fertile or the worst



(*i*)—A Grade (*ii*)—B Grade (*iii*)—C Grade (*iv*)—D Grade

Fig. 57.

land. In each figure, AC is the average cost curve and MC the marginal cost curve. P_1, P_2, P_3, P_4, and P_5 represent the rising prices. As will be explained in sec. 5, each land will be cultivated up to the point where marginal cost equals price. Suppose the market price is P_1 then only A-grade land will be cultivated. At P_1, MC (marginal cost curve) intersects AC (the average cost curve). *i.e.*, marginal cost is equal to average cost. It is also equal to price. Hence total revenue (which is based on price) is equal to total cost, and there is no surplus, and no rent. Now suppose price rises to P_2. Now B-grade land will come under cultivation, but it will pay no rent. A-grade land will, however, start paying rent. At this stage, in Fig. (*ii*), MC and AC intersect at P_2. As explained before, there is no surplus. But look at Fig. (*i*) representing A-grade land. The shaded area *abc*P_2 represents rent. This area is obtained by multiplying *ab*, the difference between marginal cost and average cost, multiplied by OM_2, the output. When price rises to P_3, the C-grade will not earn any rent but B-grade will begin yielding rent ; when price rises to P_4, then D-grade land becomes the marginal or no-rent land, C-grade starts paying rent and the rents of A and B grades will go up ; and when finally price rises to P_5, then even D grade land will fetch rent on account of scarcity. When this is the situation, the rent of each type of land is shown by the shaded area in each figure.

Does marginal or no-rent land really exist ? One would think that such a land cannot exist. Everybody will be keen on having such a land so that the owner may be in a position to demand some rent for it. But this is superficial view. No-rent land does really exist. The whole of the payment as rent may be due to investment of capital, *i.e.*, interest. The land itself may be such as not to yield any surplus at all. For example, there may be some waste land lying useless and nobody may be willing to pay anything for its use. But a prospective-tenant may agree to pay something, if the owner sinks a well there. Obviously the payment is for capital invested in sinking the well, and not for the land which is really a no-rent land. Sometimes the existence of no-rent land is concealed in big farm where the rent takes the form of so much money per acre. But in a farm there are mixed up good acres as well as bad ones. The latter, if let out alone, may fetch nothing. Or the rent paid may not be economic rent but scarcity rent. This happens in an old country with a growing population. Then, even the marginal land pays some rent which is scarcity rent. The superior lands will pay, besides scarcity rent, economic rent due to the natural differential advantages enjoyed by them. Finally, the marginal land, with regard to an old country like England, may exist in Australia or Canada supplying the same market.

Scarcity Rent. Besides economic rent we have seen, there is also scarcity rent. As the price of wheat rises, the worst land is also subjected to intensive cultivation and it yields a surplus over cost. This surplus is not a differential one compared to no-rent land which does not exist. It is due to the scarcity of land as such. Hence it is called scarcity rent.

The rent yielded by superior lands thus contains two elements : a differential surplus over the marginal land, and a payment due to scarcity of land as such. For instance, in our illustration, if cultivation is carried to a point when D pays 2 maunds of wheat as rent, the superior lands will pay a scarcity rent of 2 maunds in addition to the differential rent. The superior lands will pay scarcity rent at the same rate as the worst land, but they will also pay a differential rent. As Marshall says, "in a sense all rents are scarcity rents, and all rents are differential rents."[1] Differential rents arise because of scarcity of each particular grade of land.

3. Criticism of the Ricardian Theory. The Ricardian theory of rent has been wisely criticized. *First*, it has been pointed out that there are no "original and indestructible powers of the soil". Good lands, after being constantly cultivated, lose their fertility to a large extent and get exhausted. To this may be replied that, if after exhaustion, good lands are manured equally with the bad, the former regain their productive power much more readily than the latter. It is also pointed out that in an old country where land has been constantly manured, the upper layer, which grows crops is all man-made. There is nothing 'original' about it. But this is not correct. The climate, sunshine, air, situation, etc. of a particular piece of land are all fixed by nature. They are all 'original and indestructible'.

Secondly, it is objected that Ricardo uses the term fertility of land in a vague manner. Apart from the factor of situation, fertility depends upon the ability of the farmers and the methods of production used. Moreover, fertility is relative to the crops grown.

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[1] *Principles of Economics*, p. 422.

Thirdly; Ricardo's theory assumes that there exists a no-rent land which only repays the cost of cultivation. In most cases, it is true; there are lands which pay only a nominal rent. Such lands yield no true economic rent. The concept of scarcity rent can also explain this situation. For the substance of the theory, it is not necessary that there should exist a no-rent land.

Fourthly, according to the Ricardian theory, rent arises on account of natural differential advantages of superior lands over the marginal one. But even if all the land is of A grade, rent will still arise. It will arise owing to the operation of the law of diminishing returns when land is intensively cultivated. The marginal unit of labour and capital applied must be compensated by the product. The earlier units will give surpluses over their costs, which will constitute the rent.

Fifthly, as Carey and Roscher point out, it is historically wrong to assume that, in a new country, the best lands are cultivated first. In fact lands that are first cultivated are not usually the best; they are only the most easily accessible. To this Walker replied that by the best land Ricardo meant not the most fertile land but that which was the best both from the point of view of fertility and situation.

Sixthly, criticism is levelled against Ricardo's corollary that since the marginal land pays no rent, and price is determined by cost of the marginal land, rent does not form a part of the price of the produce.

The modern economists think that it is only from the point of view of economy as a whole that land has perfectly inelastic supply and earns a surplus or rent. This surplus is not included in cost and hence it does not enter into price. But from the point of view of an individual farmer or industry, a payment has to be made to prevent land from being transferred to some other use. The payment called *transfer earnings*, is an element of cost and hence enters into price. For the individual farmer the whole of rent is cost. "This concept of transfer earnings helps to bring the simple Ricardian theory—where transfer eanings are zero because it is the whole economy which is being studied—into a closer relation with reality." (Stonier and Hague).

Finally, the most important criticism of Ricardo, however, comes from those who deny "the necessity of explaining rent by a special theory not applicable to the rewards of other factors of production." They explain rent in the same way as wages, interest and profits. They deny its peculiar nature as contended by Ricardo. This point of view is explained below.

4. Modern Theory of Rent. In the Ricardian theory, two facts stand out prominently: (*a*) That rent arises because some lands are superior and other inferior; and (*b*) that rent is measured from the no-rent margin.

Modern writers question both these contentions. In the first place, they assert that it is a matter of indifference to the general principle of rent whether the land is uniformly good, uniformly bad or gradable. The essential factor of rent is the relative scarcity of the product that land can yield. The scarcity of land is in fact derived from the scarcity of its products. If the problem is approached from this point of view, the necessity of assuming different grades of land disappears. The "differential principle" only explains why one particular acre of land *commands a higher rent* than a less fertile one ; it does not explain *why rent arises.*

Fundamentally speaking, rent is paid because the produce of the land is scarce in relation to its demand. In the face of this scarcity, rent will arise even if all the land in a country is exactly alike. The same is the case with wages, interest and profit. These payments arise because the products of the factors concerned are scarce in relation to the demand for them. Just as a superior labourer gets higher wages and a superior entrepreneur earns higher profits over the inferior ones, superior land also commands a higher rent. "Fundamentally, all that the Ricardian theory of rent amounts to is the truism that the better article will always command the higher price. A more fertile acre will be worth more than a less fertile one simply because they are different things. The same truism applies to wages."[1] Wicksell has pointed out that rent and wages are almost parallel cases.

Thus there is no justification for placing rent in a special category. Land commands rent according to its marginal productivity just as labour commands wages or capital commands interest.

The second point of attack is the idea of the no-rent margin. This is the starting point of measuring rent according to the Ricardian theory. It is contended by modern writers that the no-rent margin may exist in some cases. but it is not fundamental to the emergence of rent. For instance, some lands may be fit only for a specific use, *e.g.*, growing corn. If it is not profitable to grow corn on them due to a fall in the price of corn, such lands may go out of cultivation, or they may just pay for the cost of the crop grown on them. Such lands may have significance from the point of view of rent but in a different sense than held by Ricardo. If such lands are cultivated, they tend to increase the supply of corn and thus lower rents, and if they go out of cultivation, rent rises due to a decrease in the supply of corn. The existence of such marginal lands does not give any ultimate explanation of rent.

But when we do not refer to any particular crop, especially in a fully developed country, there is probably no land that cannot be put to some profitable use. Thus the margin of cultivation may vary according to the use to which a particular land is put.

It is concluded, therefore, that the theory of no-rent margin and a series of differential rents created upon it, while true in particular cases, is a partial, not an ultimate, explanation of the phenomenon of rent. It does not reach the bottom of the problem. The real approach to rent, as to other phenomena of value, is through the principle of scarcity as propounded in the marginal productivity theory.

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[1] **Briggs and Jordan, *op. cit.*, p. 355.**

5. Rent and Price. The modern theory of rent deviates from the Ricardian theory in another respect too. Ricardo held that rent did not enter into the cost of production of the produce and hence did not affect its price. Rent rises because of the rise in price and not the other way round. We have seen that, according to this theory, rent is surplus over cost. Price is determined by the cost of production at the margin where there is no rent. Hence rent does not enter into price. The marginal dose of labour and capital just pays for it self. In fact, the position of the margin, according to the Ricardian theory is determined by price and not price by the position of the margin. Rent is thus not a part of price. Rent is price-determined and not price-determining.

It is true that the differential aspect of land is not a cause of price. If land A does more valuable service than land B, the extra payment obtained by land A would not affect the price of the produce. In fact, here we are considering two different things, each being paid according to its efficiency or marginal productivity. There can be a similar differential aspect of wages, and we can argue that such differential payments do not affect the price of the product of labour. But wages do enter into price.

In another sense also, it may be argued that rent does not form a part of price. Land is free gift of nature. No payment is necessary to maintain the total supply of land. In this sense, rent is not a part of the supply price of land and consequently of the products of land.

But when we are thinking, not of all the land of the country, but of the land available for particular uses, rent does form an element of price. This is clear from the conception of the opportunity cost. Most of the land is capable of being put to alternative uses. If it is put to one use, it is not available for another use. The minimum price that has to be paid is the amount which this land could earn in its most profitable *alternative* use. This is called opportunity cost or transfer price. This payment for the use of land enters into price We know that market price is determined at the point where price is equal to the marginal cost of the highest-priced land which has to be retained in the industry, and this marginal cost includes the transference price.

From the point of view of an individual firm, all rent of all factors must of course be included in the cost of production, and must, therefore, enter into price. If a farmer is using land belonging to some one else, the rent that he pays is obviously a cost for him. In the case of an owner-cultivator, too, the rent as a cost is there but its presence is obscured. The payment that he could have received, if he did not cultivate himself, is the opportunity cost of this land.

The problem may be approached in another way. Prices are determined by the scarcity of the products in relation to demand. The rent that an entrepreneur pays is part of his cost of production. If the rent is high, the entrepreneur will tend to hire less land; and, conversely, he will use more land, if rent is low. If he uses more land, the supply of land for other purposes is reduced; if he uses less land, the supply available for other purposes is increased. Thus rent, by influencing relative scarcity of land for different uses, affects the prices of different products.

In the last analysis, however, as Davenport points out, rent neither determines price nor is determined by price. Both price and rent are governed by the relative scarcities of the products of land. They both vary with the changes in this relative scarcity. The same principle applies to wages, interest and profits.

6. Ground Rents and Building Rents. The phenomenon of rent exists also with respect to urban sites. Here also there is a differential aspect of rent and a scarcity aspect. Differential rent arises because of the differences in situation of different sites. Nearness to important business centres or fashionable quarters, nearness to main thoroughfares, or a railway station etc., may give situational advantages. Some sites may be just worth using yielding no surplus due to advantages of situation. These may be regarded as marginal sites.

But marginal sites may also yield a rent due to their scarcity in relation to demand for them or due to the fact that they could be put to some other use like cultivation of crops, gardening, etc., Better situated sites will yield both a differential rent and a scarcity rent. But here again, it may be repeated that differential rent is not the ultimate explanation of the phenomenon of rent as such. High rents in the fashionable quarters of a town, for instance, are due, on the one hand, to an absolute scarcity of land and, on the other, to the relative scarcity of land with respect to any particular use, because of the competing demands for other uses.

One difference between the locational or situational value of agricultural land and the urban site may be noted. In the former case, it is merely a matter of transportation cost, whereas in the latter there is an element of monopoly. A retail shop situated in a particular locality has a monopoly of certain customers, who either by habit or from convenience, make their purchases from that shop. It is well known that prices charged by retailers differ widely. These differences cannot be accounted for by transportation costs alone. It is the monopoly element which explains these differences.

The rent paid for buildings contains two elements. One is the ground rent which is determined according to the principles discussed above. The other is payment for the use of the building erected on the site. The building rent must cover, in the long run, the various elements of costs involved. If these costs are not covered, the supply of houses will fall off. If the owner sells such a house, he will expect to be paid the estimated capitalised value of ground rent plus the building rent. In the short period, however, the cost of the building may have little influence on rent which is fixed by the relation of existing demand to existing supply. Supply, in the short period, is practically fixed, since houses are built slowly and deteriorate slowly. Demand or marginal utility is thus the main determining factor.

7. Rent of Mines, Quarries and Fisheries. Mines and quarries differ from the agricultural land in that they are sooner or later exhausted. The payments made by the lease-holder for mines and quarries, therefore, contain two elements. One is a royalty for exhaustion of the contents and the other rent proper. The rent of better mines is a differential surplus over the rent of the mine at the margin. But the ultimate explanation of rent is again the principle of scarcity in relation to the demand for the products of mines or quarries.

As regards fisheries, if the supply of fish is perennial, the income from them will be of the nature of rent measured upwards from those fisheries which may be regarded as marginal because of their low productivity or inaccessibility. If the fish is liable to be exhausted, the fisheries will be more analogous to mines. Ultimately in every case rent arises due to the principle or scarcity.

8. Quasi-Rent. The concept of Quasi-Rent was first introduced into Economics by Marshall. Quasi-Rent, according to him, is the surplus earned by the instruments of production other than land. The term 'rent' is applied to income from land and other free gifts of nature, and quasi-rent to the income derived from appliances and machines which are the product of human effort. Quasi-rent stands for the *whole* of the income which some agents of production yield when demand for them has suddenly increased. It is earned during the period when their supply cannot be increased in response to increase in demand for them. Hence it is a short-period concept. The basis of distinction between rent and quasi-rent is the fact that while the supply of land, as a free gift of nature, is fixed, that of the other instruments of production like building, machinery, etc., can be increased.

Take the case of houses. During the war, the demand for houses in towns increased owing to increase in urban population. But the supply could not be increased because of the scarcity of building materials. For the time being, their supply was as much limited as that of land. Rents rose in spite of State control. This abnormal increase in the return on capital invested in buildings is quasi-rent. It is not pure rent because the supply of houses can be increased in the long run.

Quasi-rent is only a temporary surplus. With the increase in the supply of houses, as building materials become available, this surplus will tend to disappear. A similar surplus may arise in the case of other durable goods like machines, ships, etc. Similarly, quasi-rent may arise due to a temporary scarcity of particular kind of skill which can be increased only if enough time is given.

The earnings from such durable goods like machines must, in the long run, equal the prevailing rate of interest. Temporarily, however, due to shortage, they may yield surplus earnings which are called quasi-rent.

Quasi rent, however, should be distinguished from interest. The term interest is applied to return on free or floating capital. Quasi-rent is the return from specialised or sunk capital, *i.e.*, from old investments of capital. It should always be remembered that the distinction between rent and quasi-rent and, in fact, the return on any other factor of production, is only a matter of degree. In the words of Marshall, " That which is rightly regarded as interest on 'free' or ' floating ' capital or on new investments of capital, is more properly treated as a sort of rent—a quasi-rent on old investments of capital. And there is no sharp line of division between floating capital and that which has been sunk for a special branch of production, nor between new and old investments of capital; each group shades into the other gradually."[1] Rent is thus " *a leading species of a large genus* ". They are all scarce in relation to demand. Differential surpluses arise in all of them. But since the supply of land in the absolute sense is limited in a larger degree than that of other factors, land is put in a separate category by economists. Fundamentally speaking, there is no justification for this distinction.

It is necessary to clear one misconception. Quasi-rent his been called 'unnecessary profit,' that is, it does not form part of costs. This misconception arises from not making a clear distinction between the long-run and short-run views. For the short period, quasi-rent may be regarded as unnecessary profit. It does not form part of price, because the appliances are already there in existence and no special costs have to be incurred. But, in the long run, several supplementary costs may have to be incurred and the business man must be duly compensated for them. These will certainly form part of costs and must be regarded as ' necessary profit'.

9. Rent and Economic Progress. How is rent affected by economic progress? Broadly speaking, economic progress may be indicated by (*a*) technical advances in methods of production, (*b*) improvements in transport, and (*c*) growth of population.

(*a*) Improved methods of agricultural production may affect all agricultural lands equally, or they may affect only the better lands or only the marginal lands. If all lands are affected equally, the supply of the produce will increase, demand remaining the same, its price will fall; marginal lands will go out of cultivation and, according to the Ricardian theory, rents of superior lands will fall.

If the investments only affect the marginal land, according to the Ricardian theory, rents will again fall because the surplus of the superior land over the marginal land will be reduced. If, on the other hand, the improvements only affect the best lands, their rent will rise since their productivity, compared with that of the marginal land, will be higher. But if, in this latter case, the higher productivity of superior lands depresses the price of the product, rents may fall again. Thus ultimately rents will depend upon the relation between supply and demand of the product of the land. *Agricultural improvements will affect rent not so much by affecting the margin of cultivation as the degree of scarcity of land or its products.*

(*b*) As regards transport improvements, according to the Ricardian theory, better transport will affect rent by affecting the factor of situation. Distant lands will become nearer the market as it were.

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[1] *Principles of Economics*, 1936, p. 412.

Their rents will rise. The rents of more favourably situated lands will fall. This can also be explained in terms of scarcity. If improved transport increases scarcity (by leading to exports from the given region), rents will rise; in the contrary circumstances rents will fall.

(*c*) As for the growth of population, its result is to raise rents. According to the Ricardian theory, this will be due to more intensive cultivation of old lands and extension of cultivation to inferior lands, thus leading to a fall of the margin of cultivation. According to the more recent way of putting it, increase in population will increase the relative scarcity of land in relation to the demand for its products, and hence raise rents.

10. Rent Element in Other Factors. The rent element is not peculiar to land. But it can be traced in other agents of production as well.

(1) *Rent Element in Profits.* All entrepreneurs are not of same ability. At one extreme are those who are just able to keep their heads above water earning low profits. But at the other extreme are those who, on account of their superior organising ability, are able to produce at a lower cost. They enjoy higher profits which are similar to the surplus enjoyed by superior lands. Corresponding to situational advantages possessed by land, certain entrepreneurs make large profits on account of birth or business influence. There is thus the rent element in profits. Profits have been called as '*rent of ability*'.

(2) *Rent Element in Wages.* There are varying degrees of efficiency to be found among the workers. Roughly speaking, wages correspond to personal efficiency. The more efficient workers enjoy a surplus or extra wages as compared with the marginal worker. This is analogous to the rent of more accessible lands.

(3) *Rent Element in Interest.* The prevailing rate of interest compensates the marginal investor, *i.e.*, one who is just induced to save. But there are others who are prepared to save even at lower rates. Such super-marginal investors enjoy a surplus (rent element). This corresponds to rent in the extensive form. But there is rent element in interest corresponding to the intensive form too. The last or marginal units of saving are just compensated by the rate of interest; the earlier units yield a surplus which is like rent.

There is a minimum payment necessary to induce a factor to remain in a given employment. Any earning over and above this is of the nature of rent and this can be traced in all factors.

11. Transfer Earnings. We know that scarce means at the disposal of the community are capable of alternative uses. Few factors of production are specific. It is the lure of better earnings that induces transfer from one use to another. When a factor unit shifts into the most favourable position as regards earnings, then the amount it makes is known as transfer earnings. In Benham's words, "*The amount of money which any particular unit could earn in its best-paid alternative use is sometimes called its transfer earnings.*" To quote Mrs. Robinson, "The price which is necessary to retain a given unit of a factor in a certain industry may be called its *transfer earnings* or *transfer* *price*, since a reduction of the payment made for it below this price would cause it to be transferred elsewhere ; and any particular unit of a factor may be said to be at the margin of transference, or to be a marginal unit, if the earnings, which it receives in the industry where it is employed, are only just sufficient to prevent it from transferring itself to some other use.''[1]

The concept of transfer earnings has a close bearing on the theory of economic rent. Suppose a land devoted to the cultivation of cotton earns a little more than when it is devoted to the growing of sugar-cane. If the profit in cotton cultivation falls a little or that in cane cultivation rises a little, the cotton land will be converted into cane land. Thus fluctuations in prices of different crops may make the cultivation of one crop more profitable than that of another. There will then be a tendency for the land to be transferred from one use to another in search for higher earnings. If an agent is earning more than what it would earn when transferred to the best-paid alternative, the surplus is rent. In Benham's words, " *In general the excess of what any unit gets over its transfer earnings is of the nature of rent.*'' In case there is a piece of land that is specific for the cultivation of cotton, *i.e.*, it can grow nothing else, then its transfer earning is zero. The whole of the cotton yield of such a land then may be regarded as rent. In other words, if a factor unit is earning in an industry more than what is sufficient to retain it in the industry, the difference between the actual earning and the transfer earning may be regarded as rent from the point of view of the industry concerned.

Thus on the basis of the concept of transfer earnings, it can be seen that land which earns rent on account of its supply being inelastic for the economy as a whole, may earn no rent in a particular industry because its supply may be perfectly elastic from the point of view of the *particular industry.* From the point of view of economy as a whole, land has no alternative use at all. Hence from this point of view its transfer earnings are equal to zero. That is why all the earnings of land are, from this point of view, rent. But, in a particular industry, land can earn more than its transfer earnings and this excess of earnings over transfer earnings, is rent from the point of view of the industry using the land. An individual industry has to pay a price to keep land from being transferred to the next most profitable use. Similarly, an individual farmer has to pay a price for the use of land, to keep it from being transferred to someone else. Thus for the individual farmer the whole rent that he pays is a cost.

As Mrs. Robinson says, " Each individual unit of each factor will be fitted into the place where its earnings will be greatest ; when its earnings in that use fall it will retreat to its next most profitable use and, if there is an appreciable difference between its actual earnings and its earnings in the next most profitable use to which it could be put it will be receiving rent. If each productive unit is like its neighbour, both in respect to their efficiencies in the industry employing them and in respect to their efficiencies in alternative uses, there will be no rent''[2].

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[1] *The Economics of Imperfect Competition*, 1945, p. 104.

[2] *Ibid.* p. 107.

The concept of transfer earnings also shows how costs may vary with the changes in output. An expanding industry must draw upon other industries for additional supply of the factors of production that it may need. In case these factors are already enjoying a higher standards of earnings, this industry must pay them still more, otherwise those factors will not be attracted to this particular industry. In these circumstances, the additional output is obtained at a very high cost, at any rate, in the short period. The average and marginal costs per unit will increase, simply because the transfer earnings of the factors are higher.

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CHAPTER XXVI

WAGES

1. Definition. In the previous chapter, we explained the determination of rent, the share of the first factor of production. In this chapter, we shall discuss the share of the second factor. Labour is the second factor of production. Its remuneration is called wages. The term 'wages' may be used in a wide or a narrow sense. In the wide sense, it means payments made for the services of labour. Some writers use the term 'wages' in a restricted sense. "A wage may be defined," says Benham, "as a sum of money paid under contract by an employer to a worker for services rendered". We shall use the term wages in the wide sense as the share of the national dividend which goes to those who work with their hands or brains, whether independently or for an employer. It should be noted, however, that wages of independent workers fluctuate more over time than of those working for others because they have to bear business risks.

Wages may be paid according to the work done or according to the period of time the worker has been employed. The former is called '*piece wages*' and the latter '*time wages*'. When work can be easily standardised or measured, payment by the piece is preferred by the employer. Similar is the case where the employer desires a large output. When the work is such as cannot be easily standardised or inspected and the quality is more important than quantity, time wages are preferred.

When a standard amount of work is to be done within a specified time, the system is known as *task work*.

Sometimes a basic time-wage is fixed and it is supplemented by a piece-wage according to the amount of goods produced. Sometimes a premium wage is paid to a group of workers collectively for extra work done.

In some cases, wages are regulated by law. A minimum wage may be fixed in certain exceptionally low-paid employments, *i.e.*, sweated trades. Some people suggest a national minimum wage applying to all industries.

2. Nominal *versus* **Real Wages.** Before we consider theories of wages, it will be necessary to explain the distinction between nominal wages and real wages. Nominal wages are wages paid or received in terms of money. But money wages alone may not give us a correct idea of the economic position of a worker. In order to find real wages, which determine the standard of living of a person, the following factors must be taken into consideration:

(*a*) *The purchasing power of money.* When comparing wages at different places and at different times, the changes in the purchasing power of money must be taken into account. A part of the high wages in England and America may be due to higher prices prevailing in those countries. One hundred rupees in a village may provide a much more comfortable life than a similar amount in a town, or *vice versa*, according to circumstances and tastes of the person concerned. One hundred rupees in 1939 had much greater purchasing power than in 1959. Even an increase of money wages thus leaves real wages at a lower level in 1959 as compared with 1939.

(*b*) *Subsidiary earnings.* In addition to the regualr money wage, an employee have extra earnings in the form of money or goods. For example, free board and lodging are provided to the domestic servants and may in some cases be given to peons ; Professors obtain additional income by marking examination papers or from tuition fees, and so on. Subsidiary earnings may also arise from opportunities of employment available to other members of the worker's family.

(*c*) *Extra work without extra payment.* If an employee is required to do extra work without any compensation, his real wages decrease to that extent. Bank clerks are paid for their general duty during working hours, but quite often they are required to work late hours just to discover a mistake in accounts. For such extra work they are paid nothing.

(*d*) *Regularity or irregularity of the employment.* Regular or more secure employments may give lower money wages, but the real wages may be higher than irregular and insecure employments which give high money wages. For instance, a person with Rs. 5 daily wage but whose employment is intermittent, may not be so well off as another who earns *regularly* Rs. 2 a day.

(*e*) *Conditions of work.* Some occupations are healthier than others, and in some the hours of work are shorter than in others ; the work may be more pleasant or less pleasant; the employer may be more sympathetic or less, and so on. All these things should be taken into account in estimating a person's real wage.

(*f*) *Future Prospects.* A low money income will be considered a high real wage if there are good prospects of a rise in the future. On the other hand, a high initial salary may not be considered as good in the absence of prospects for a further rise.

3. **Theories of Wages : The Subsistence Theory**[1] : Several theories have been put forward to explain the general level of wages prevalent in a country. To take first Subsistence Theory. This theory originated from the Physiocratic School of the French economists and was generally accepted during the 19th century. The German economist Lassalle called it the Iron Law of Wages or the Brazen Law Wages. Karl Marx made it the basis of his theory of exploitation.

According to this theory, wages tend to settle at the level just sufficient to maintain the worker and his family at minimum subsistence. If wages rise above this level, the workers are encouraged to marry and to have large families. The larger supply of labour brings wages down to the subsistence level. If wages fall below this level, marriages and births are discouraged and under-nourishment increases the death-rate. Ultimately labour supply is decreased, until wages rise again to the subsistence level.

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[1] *See* Dobb, M.—*Wages*, 1932, Ch. IV, sec. 3, p. 100.

In backward countries, wages are to be found at or near the subsistence level. But the theory does not apply to advanced countries like England and America. The theory evidently is based on the Malthusian Law of Population. But it is wrong to say that every increase in wages must inevitably be followed by an increase in birth rate. An increase in wages may be followed by a higher standard of living. In Denmark and Holland, for instance,. agricultural labourers receive wages above the mere subsistence level. In the Industrial countries of Europe and America, wages have been steadily rising and the working classes are much more prosperous now than they were a century ago.

Another criticism of the theory is that the subsistence level is more or less uniform for all working classes with certain exceptions. The theory thus does not explain differences of wages in different employments.

Finally, it may be said that the theory explains wages only with reference to supply; the demand side is entirely ignored. On the demand side, the employer has to consider the work which the employee gives him and not the subsistence of the employee.

4. **The Wages Fund Theory.**[1] This theory is associated with the name of J.S. Mill. "Wages," wrote Mill, "depend upon the demand and supply of labour, or, as it is often expressed, on the proportion between population and capital. By population is here meant the number only of the labouring classes, or rather of those who work for hire, and by capital, only circulating capital and not even the whole of that, but the part which is expended on the direct purchase of labour."

According to this theory, therefore, wages depend upon two quantities, *viz* . (*i*) the wage fund or the circulating capital set aside for the purchase of labour, and (*ii*) the number of labourers seeking employment. Wages, therefore, cannot rise unless either the wage fund increases or the number of workers decreases. But since the theory takes the wage fund as fixed, wages could rise only by a reduction in the number of workers. It would appear, therefore, that, according to this theory, the efforts of trade unions to raise wages are futile. If they succeed in raising wages in one trade, it can only be at the expense of another, since the wage fund is fixed and the trade unions have no control over population. They cannot raise wages for labour class *as a whole*.

The theory has been widely criticized and stands rejected now. Mill himself recanted it in the second edition of his *Principles*.

Mill thought that wages were paid out of circulating capital alone. Whether the source of wages is capital or the present products, has been the subject of a keen controversy in the past. The fact is that in some cases, where the process of production is short (*e.g.*, final stages of the productive process), wages are paid out of the present production. On the other hand, when a process of production is long, the labourer obviously does not obtain wages from the product of his labour either directly or through exchange. In such cases wages mainly come out of capital.

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[1] *Ibid.*, Ch. IV, sec. 6. See also Marshall's *Principles*, Appendix (*a*).

Mill argued that wages were paid out of a certain fixed proportion of capital set aside for this purpose. This also is not true. There is no fixed wage fund in this sense. The fund, if we can at all call it so, is elastic. Its volume changes according to the prospects of profits. The productivity of labour at a given time is an important factor in determining these prospects.

Further, the theory is a mere truism. It does not tell us about the sources of the wage fund and the method by which it is estimated. It simply tells us, what is self-evident, namely, that the wage can be ascertained by dividing the wage fund by the number of workers.

Again it assumes a degree of antagonism between labour and capital that does not exist. According to this theory, wages can increase only at the expense of profits. But this is not necessarily so. In times of business prosperity, both wages and profits can go up. It is also wrong to assume that the forcing up of the wages will drive capital abroad. Capital is not so sensitive, nor are the profits so inelastic. Returns on capital fluctuate from time to time.

Moreover the wage fund theory does not explain why wages differ in different occupations. Besides, the wage rates prevalent in different countries do not correspond to the total amount of capital available there. In new countries, capital is scarce and the wages are high ; the opposite is the case in the old countries.

5. **Residual Claimant Theory.** This theory has been advanced by the American economist, Walker. According to him, wages are the residue left over, after the other factors of production have been paid. Walker thinks that rent, profit and interest are determined by definite laws. There is no similar law operating as regards wages. Out of the total production, therefore, after rent, interest and profit have been paid, the remainder goes to the workers as wages. The theory thus admits the possibility of increase in wages through greater efficiency of labour. In this sense, it is an optimistic theory, whereas the subsistence theory and the wages fund theory are pessimistic.

This theory also has been rejected by most economists. It has several defects. *In the first place*, it does not explain how trade unions are able to raise wages. *Secondly*, it ignores the influence of supply of labour on wages. *Thirdly*, one fails to understand why the same law of supply and demand, that explains the remuneration of other factors of production, should not be applied to wages as well. *Finally*, the residual claimant is not the worker but the entrepreneur.

6. **Marginal Productivity Theory of Wages.**[1] The marginal productivity theory takes into consideration both the supply of and demand for labour. According to this theory, wages are determined by the equilibrium between the forces of supply and demand. At any particular time, supply is more or less given and demand plays the more important part. Over long periods, supply of labour can be increased or decreased and the forces controlling supply also be-

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[1] For a detailed study see *Readings in the Theory of Income Distribution*, pp. 221-236, D. H. Robertson's article on " Wage Grumbles ".

come important ; but these forces also act by influencing marginal productivity. That is why the theory is called the marginal productivity theory. It takes into consideration both the demand for, and supply of, labour.

Demand for Labour. The demand for labour is a derived demand. It is derived from the demand for the commodities it helps to produce. Hence an expected increase in the demand for a commodity will increase the demand for the type of labour that produces this commodity. Demand for labour will generally be inelastic if their wages form only a small proportion of the total wages. The demand, on the other hand, will be elastic if the demand for the commodity it produces is elastic or if cheaper substitutes are available.

Just as there is a demand price for commodities, so there is a demand price for labour. The demand for labour under typical circumstances of a modern country comes from the employer who employs labour and other factors of production for making profits out of his business. The demand price of labour, therefore, is the wage that an employer is willing to pay for that particular kind of labour. Suppose he employs labourers one by one. After a point, the law of diminishing returns will come into operation. Every additional labourer employed will add to the total net production at a decreasing rate. The employer will naturally stop employing additional labourers at the point at which the cost of employing a labourer just equals (in fact it is a little less than) the addition made by him to the value of the total net product. Thus the wages that he will pay to such a labourer (the marginal unit of labour) will be equal to the value of this additional product or marginal productivity. But since all the labourers may be assumed to be of the same grade, what is paid to the marginal labourer will be paid to all the labourers.

In fact, for any particular employer, working under perfect competition, wages are already settled by the market forces. He cannot influence wages appreciably by employing more or less of labour. The individual employer hires as many labourers as will equate the marginal productivity of labour to the prevailing rates of wages. It is the demand of all the employers taken in the aggregate in relation to the given supply that determines the rate of wages in the market.

Supply of Labour. When we explain wages from the side of demand we assume supply to be fixed. Similarly we can assume demand to be fixed and say that when supply of labour increases, its marginal productivity falls, and conversely, when supply decreases, its marginal productivity rises. In the former case wages fall, and in the latter they will rise.

The supply of labour may be influenced by various factors. An offer of a higher wage will attract more labour, other things being equal and *vice versa.* But this refers only to a particular occupation and not to all occupations taken together. The other factors are : the general attitude towards marriage, the size of the family, birth control, the standard of medical aid, sanitation, etc. The supply of labour *as a whole* depends upon the growth of population. The supply of labour *in a particular employment* can be increased at the expense of other employments, if the marginal productivity of labour and hence wages in such employments rise.

A given supply of labour under conditions of perfect competition gets distributed in various employments in such a way as to make the marginal productivity of labour in all the employments the same. But if labour cannot move freely from one employment to another, the marginal productivity will be different in different employments, and wages will also be different even for the same kind of labour.

The supply of labour may be decreased by labourers refusing to work for a time. This happens when labour is organised into trade unions. The labourers may not accept wages offered by the employer if such wages do not ensure the maintenance of a standard of living to which they are accustomed. But, as we shall see, it is only when higher wages are justified by higher marginal productivity that high wages will be paid. Thus labourers with low marginal productivity cannot demand high wages merely on the basis of their standard of living. In the long run, however, marginal productivity, wages and the standard of living tend to adjust to one another.

On the whole, we might say that, the number of potential workers being given, the supply of labour may be defined as the schedule of units of labour that the workers are willing to give at the different wage levels. This depends on two factors ; (*a*) the number of workers who are willing and able to work at different wages ; (*b*) the number of working hours that each worker is willing and able to put in at different wages.

In case the workers have no staying power and the only alternative to work is starvation, the supply of labour in general will be perfectly inelastic. This means that wages can be driven down. Over a short period, reduction in wages may not cause any reduction in the supply of labour. But if wages are driven too low, competition among employers themselves will pull them up. Even over a long period, the supply of labour is not very elastic.

Limitations of the Marginal Productivity Theory. We have already studied in detail the various limitations and criticisms of the Marginal Productivity Theory as a general principle of distribution.[1] With reference to its application to wages, we may repeat that the theory is true only under certain assumptions such as perfect competition, perfect mobility of labour from employment to employment, homogeneous character of all labour, constant rates of interest and rent and given prices of the product. It is a static theory. The actual world is dynamic. All the factors assumed to be constant are in fact constantly changing. Competition is never perfect; mobility of labour is restricted for various reasons; all labour is not of the same grade : remuneration to other factors of production does not remain constant; and the prices of the products of labour vary. All these changes modify the theory when applied to actual conditions. The theory, however, as an assertion of a tendency is true and is valuable in understanding the basic forces that determine wage rates.

In the actual world, owing to the absence of the above assumptions, there is no single rate of wages that may be applicable to all labour. Wages differ from place to place, from person to person and from employment to employment. Differences in efficiency, natural or acquired, and economic friction cause such differences in wages.

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[1] *See* Chapter XXIV.

In the matter of bargaining, the employers are in a much stronger position, and they do not feel compelled to pay the wage they can and they ought to. The workers too do not seek the best market on account of ignorance and reluctance to leave their hearths and homes. Hence the prevailing wage-rate is generally less than the one warranted by marginal productivity. Moreover, it is difficult to measure productivity; it is a question whether it should be measured in terms of product or of value.

The modern theory of wages applies to labour the fundamental principle according to which values in general are determined. Corresponding to the market value and normal value of commodities, respectively, we have *wages at any given moment* and *wages in the long run*. "Wages *at any moment* are determined by the marginal productivity of labour to the entrepreneur, while normal wages (*i.e.*, wages in the long run) must be sufficient to cover the standard of life of the workers in the grade concerned. *In the long run*, the level of wages tends to that point at which the marginal productivity of the worker is equal to the supply price of the worker as determined by his standard of life"[1] Really, there are two limits within which the actual wage will lie. The upper limit is fixed by the employer according to the marginal productivity of the worker. The lower limit is determined by his standard of life. Between these limits, the actual wage will be settled somewhere according to the relative bargaining strength of the parties.

Under competitive conditions, wages are, in the long run, equal to the marginal as well as average productivity of labour. If marginal productivity is greater than average productivity, it will be worthwhile to employ more labour till marginal productivity falls to the level of average productivity. On the other hand, when marginal productivity is less than average productivity, less labour will be employed till the marginal productivity rises to the level of average productivity. Marginal productivity and average productivity thus tend to be equalised. Since wages are equal to marginal productivity, they are also equal to average productivity.[1] This is shown in the following diagram :—

R represents the wage level, AP is the average productivity curve and MP the marginal productivity curve. They intersect at P which shows that wages are equal both to the marginal productivity and average productivity. When AP is rising, MP>AP, and when AP is falling, MP<AP. But when they are in a state of equilibrium, *i.e.*, when AP is neither rising nor falling, MP=AP. Hence wage=MP=AP.

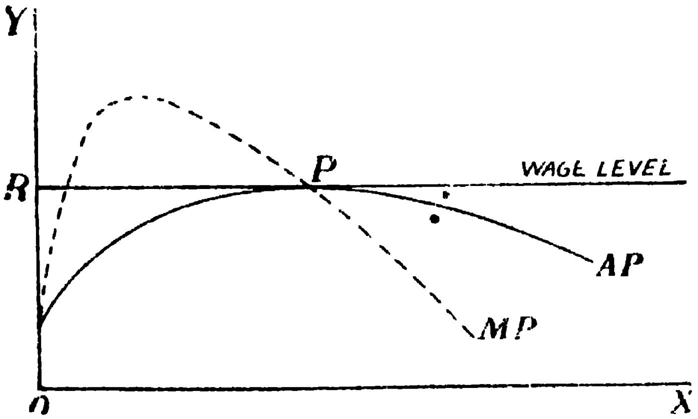

Fig. 58.

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[1] S. E. Thomas,—*Elements Economics*, 1939, p. 258.

7. **Taussig's Theory of Wages**[1]. The American economist Taussig gives a modified version of the Marginal Productivity Theory of Wages. According to him, wages represent the ***marginal discounted product*** of labour.

He thinks that the labourer cannot get the full amount of the marginal output. This is because production takes time and the final product of labour cannot be obtained immediately. But the labourers have to be supported in the meantime. This is done by the capitalist employer. The employer does not pay the full amount of the expected marginal product of labour. He deducts a certain percentage from the final output in order to compensate himself for the risk he takes in making the advance. This deduction, according to Taussig, is made at the current rate of interest. Wages thus equal the total product of labour on the marginal land or in the marginal firm *minus* the amount discounted as explained above. The present value of the product is ascertained by discounting its anticipated future returns.

Two weaknesses of this theory have been recognized by Taussig himself. *First*, that it is " a dim and abstract one, remote from the problem of real life ". To this he replies that this weakness is common to all economic generalisations. *Second* and a more serious objection is that the joint product is discounted at the current rate of interest. But according to his own analysis, the rate of interest is a result of the process of advance to the labourers, because it depends on the excess of what the labourers produce in the future over what is advanced to them in the present. This would mean reasoning in a circle. To meet this difficulty Taussig suggests that we determine the rate of interest independently of marginal productivity by the rate of time preference, and with the interest thus determined discount the marginal product of labour. This, however, hardly solves the difficulty; it merely evades it.

Taussig's theory ultimately analysed is another version of the Residual Claimant Theory of Wages. He says, in fact, that wages are what is left after rent, interest and profits are deducted from the total output. As such, the theory is open to all the objections put forward against the Residual Claimant Theory.

8. **Wages Fluctuations.** We have seen that the wage rate is determined by the interaction of the forces of demand for and suply of labour. Demand for labour is, in the last resort, derived from demand for the goods they produce ; and supply of labour depends on the changes in population, either through natural increase or through migration. Any change on the demand side or on the supply side or both is likely to bring about a corresponding change in the wage rate.

Broadly speaking, wages will rise under the following circumstances :—

(*i*) Decrease in the working population either by deaths or by emigration. (*ii*) Improvement in the efficiency of the workers, (*iii*) Economic development of the country. Marked and rapid economic development creates more demand for labour and increases the national dividend, which is the source of remuneration for the agents of production. (*iv*) More scientific exploitation of the natural resources having the same effect. (*v*) Formation of strong trade unions. (*vi*) Improvement in efficiency of the employers or increase in their number creating a keen competition for labour. (*vii*) War.

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[1] For a detailed study consult ***Readings in the Theory of Income Distribution***, pp. 278-293.

Conversely, wages may fall in the following circumstances:—

(*i*) Increase in population. (*ii*) Economic depression. (*iii*) Impairing of labour efficiency through ill-health, starvation, badhousing, congestion, etc. (*iv*) Destruction of national assets by war.

9. Wages and the Standard of Living[1]. Late in the 19th century a modified form of the subsistence theory was propounded by some writers. They contended that the wages tended to conform not to the level of mere subsistence but to that of the standard of living to which workers have become habituated. There is some truth in this modified form of the theory because the standard of living does influence wages in several ways: *First*, workers, as far as possible, will refuse to accept wages below their established standard of living, and by withholding the supply of labour, will compel the employer to accede to their demand. *Secondly*, the higher standard of living, by increasing efficiency of workers, may increase their marginal productivity and hence wages. *Thirdly*, the standard of living may influence wages by setting a limit to the increase of population. If the wages do not cover the established standard of living of the workers, they will abstain from marriage or limit the size of the family. This will reduce the supply of labour, increase its marginal productivity, and raise wages.

It should be noted, however, that the standard of living depends much more on wages than wages upon the standard of living. Mere insistence upon a higher standard of living will not raise wages unless the marginal productivity of labour justifies higher wages. Thus, wages influence standard of living *directly*, whereas the effect of the standard of living on wages is only *indirect*, *i.e.*, through labour efficiency.

10. Wages and Efficiency. There is a close relation between wages and efficiency. Greater efficiency leads to greater productivity of a labour. This enables him to get higher wages. High wages, in their turn, enable a labourer to maintain a higher standard of living. Higher standard of living implies better food, clothing and housing, better opportunities for training and recreation, etc. All these things, in their turn, tend to increase the productive efficiency of the labourer and his offspring, and enable them to earn higher wages. Conversely, low wages, by keeping the standard of living low, lead to low productivity and lower earning power. Thus a vicious circle may be created, and it may become difficult to get out of it. It is in this way that the poor countries tend to become poorer and the rich countries richer. Mere raising of wages, however, does not automatically raise productive efficiency. It may increase senseless expenditure without raising the standard of living.

11. Wages and Inventions. How are wages influenced by inventions? The answer will depend upon whether the new inventions result in economising labour or capital. If an invention results in the economy of labour thus reducing demand for it, its marginal productivity will fall and the wages will tend to fall. If, on the other hand, an invention reduces the demand for capital, capital relative to labour will become superfluous. Its marginal productivity will fall relatively to that of labour. Wages then may not fall and may even rise. In practice, however, few inventions economise either labour or capital alone. But most of them economise labour more than they do capital. They thus tend to lower wages in the short period but not necessarily in the long period. In the long period, wages may be increased due to the increase in the national dividend brought about by new inventions. The national dividend is bound to increase because inventions decrease the quantity of resources required to produce a given output. In this way, means of production are released for use in other fields.

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[1] **Dobb's treatment is excellent. See Ch. IV, Secs. 4 and 5, pp. 106-108.**

It should be considered whether the increased share of labour in the national dividend is relative or it is absolute. It is quite possible that new inventions may increase wages only in the absolute sense, whereas, relatively to the share of capital, the share of labour may go down even in the long run.

12. Relative Wages. So far we were concerned with general wages. We have examined the general principles which determine the share of the national dividend going to labour as against that going to the other factors of production.

The problem of relative wages is different. Here we have to explain the causes of differences in wages in different employments or occupations or grades of employments and also between different persons in the same employment or grade. Wages everywhere tend to approximate to the marginal productivity of labour. But the marginal productivity of labour is different in different employments and grades. It varies with the degree of scarcity of each kind of labour in relation to the demand for it, or ultimately in relation to the demand for the products of each kind of labour.

If there were free mobility of labour over the whole field of employment, real wage would tend to be in proportion to the relative efficiency of labour engaged in each kind of work. Real wages (not nominal wages) of workers of the same level of efficiency would tend to be the same. If workers in one employment were getting real wages more than in proportion to their efficiency, labour would tend to move to that employment until increased supply would bring down its marginal productivity and wages. An opposite movement would take place if in an employment lower wages were paid than those justified by the relative efficiency of labour. Actually, however, labour cannot move freely from employment to employment especially in different grades. Different grades tend to become " non-competing groups ".

Why Relative Wages Differ? We may summarise here the causes which create differences in wages in different employments, professions, and localities :

(*i*) *Differences in efficiency.* These may be due to different inborn qualities, education, training, and conditions under which work is performed. When efficiencies are different, wages must be different.

(*ii*) *Existence of non-competing groups.* As explained above. these arise because of the difficulties in the way of mobility of labour from low-paid to high-paid employments. These difficulties may be due to geographical, social or economic reasons. They may arise from lack of transport facilities, existence of family ties or caste barriers, and lack of means for better training, etc.

(*iii*) *The difficulty of learning a trade.* The number of those who can master difficult trades is small. Their supply is less than demand and their wages will be higher.

(*iv*) *Differences in agreeableness or social esteem of employment.* Disagreeable employments must pay higher wages in order to attract labourers. If, however, disagreeable work can be performed by unskilled workers, who cannot do anything better (due to caste or other disabilities), wages may be quite low, *e.g.*, sweepers in India.

(*v*) *Future Prospects.* If an occupation gives hopes of future promotion, people will accept a lower start in it, as against another occupation offering higher initial rewards but no chances of rise in the future. The number of top prizes available in a profession also accounts for differences in wages.

(*vi*) *Hazardous and dangerous* occupations generally offer higher emoluments.

(*vii*) *Regularity or irregularity of employment* also exerts a strong influence on the level of wages. Regular employment generally carries a low salary.

It should be noted again that all these factors create differences in wages by affecting the adjustment of supply of labour to demand for it in the case of various employments and grades. Wages are, in every case, determined by the degree of scarcity in relation to demand for labour, or by the marginal productivity of labour with respect to each kind of work.

13. Low Wages of Women. In most cases, women are paid lower wages for doing the same kind of work. There are several reasons for this : *In the first place*, it is due to long habit and custom. Until comparatively recently, a woman was regarded as a drudge even in advanced countries. Even today women tend to crowd into occupations involving drudgery and depress wages there.

Secondly, since women do not make their work a life career, they do not equip themselves with proper education and training. Their aim normally is to get married, and after marriage most of them cease to earn independently.

Thirdly, for the same reasons, women do not organize themselves into trade unions to enforce higher wages for themselves. Their employment being only a stop-gap between school/college and marriage, they do not try to improve their economic position.

Fourthly, women workers are prepared to accept lower wages because they have very limited obligations and responsibilities. In most cases, they do not depend merely on their own earnings, even when they are in employment. Husband, brother, or father, may and does, give them financial support.

Finally, male workers are supposed to be much more reliable for continuous and efficient work than female workers due to various reasons. Men are physically stronger and can undertake more strenuous work and can bear much greater nervous strain. Moreover, a woman on account of biological reasons is partly or wholly incapacitated for full work during certain periods of her life.

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CHAPTER XXVII

SOME PROBLEMS OF LABOUR

1. Trade Unions. In this chapter, we shall study some labour problems like labour disputes, trade unions, some new schemes of wage payments, the problem of un-employment, etc. Take first trade unions. In the previous chapter, we discussed the general principles that determine the share of labour in the national dividend. But these principles do not always operate freely. An employer has certain advantages over the employees. The employees, therefore, have to help themselves by organising into trade unions. "*A trade union,*" in the words of the Webbs, "*is a continuous association of wage-earners for the purpose of maintaining or improving the conditions of their employment.*"

Labour is most perishable. It has no reserve power. A day's labour withheld is lost for ever. The labourer, therefore, either must work or starve. "For it must be remembered," says Marshall, "that a man who employs a thousand others is in himself an absolutely rigid combination to the extent of one thousand units among buyers in the labour market". Owing to this weakness in bargaining, the labourers are likely to get wages much lower than their marginal productivity. It was, therefore, found by the labouring classes, early in the industrial advancement of various countries, that unless they improved their bargaining position by forming trade unions, they were in danger of serious exploitation by the employer class.

Functions of Trade Unions. Trade unions in modern industrial countries perform two sets of functions, *viz.*, the militant and the fraternal. They are militant organisations fighting for the rights of the workers. Their aim is to ensure adequate wages, better conditions of work and, more recently, to secure some share in the control of industry. For these they have to fight and they use two weapons *viz.*, strike and boycott. This is the militant function. Their fraternal function consists in mutual help. By creating a fund of their own through subscriptions by members, trade unions give financial help to labourers in the form of sickness and accident benefits, support them during unemployment and during strikes and lock-outs arising out of industrial disputes. These are known as the fraternal functions.

2. Trade Unions and Wages. The question of wages has been, and still is, the main concern of trade unions. Labour leaders always believe that trade unions, by improving the bargaining power of labour, can raise wages. On the other hand, the classical economists argued that wages could be raised only at the expense of profits, and a fall in profits by reducing industrial activity would reduce demand for labour. Thus either wages must be reduced or unemployment must be faced. Trade unions, according to this view, cannot raise wages permanently. It is also pointed out that wages are determined by marginal productivity and the unions can have no influence in the matter.

This, however, is not the whole truth. Trade unions can raise wages in two ways :—

(*i*) They can ensure that labour is paid the full value of its marginal productivity. Under perfect competition, no doubt, wages tend to equal the marginal productivity of labour. But competition, in the actual world, is not perfect. Hence wages do not come up to the marginal productivity level due to the weak bargaining power of labour. By improving the bargaining power, the trade unions can raise wages up to the marginal productivity level.

(*ii*) Trade unions can improve the marginal productivity of labour itself. (*a*) They force the employer to use more up-to-date appliances and organisation. (*b*) They improve the efficiency of labour itself. This they do by fostering habits of sobriety, thrift and honesty and by helping the younger generation to acquire better education and training. (*c*) Trade unions may also increase the marginal productivity of a particular group of labourers by restricting its supply.

There are special circumstances in which a particular set of workers can raise their wages by withdrawing their supply : (1) One condition for their being able to raise wages is that the demand for that group of labour should be inelastic. This means that the demand for the commodity, which the group helps to produce, must be inelastic. (2) The wages of the said group should form a small proportion of the total cost of production of the commodity concerned. (3) The other factors of production should be "squeezable." In other words, they should not be easily transferable to other uses. In the long run, however, there is a danger that the employers may adopt substitutes by means of labour-saving appliances, and the demand for labour may fall, thus bringing down wages.

Trade unions can raise wages if they are all-inclusive and it is difficult to import ' black-legs '.

We may note certain implications of wage determination by trade unions. By imposing a high wage, a trade union may prevent undue expansion of an industry when the only attraction to the new firms was the prevalence of a low wage. But it may also cause unemployment by insisting on a wage which is beyond the capacity of the industry to bear. Some employers will be forced out and others will contract output. In both cases, some labour will be discharged. The movement of the discharged labour into other industries will depress wages there. Restrictions on admission to a union is unfair and smacks of monopoly, and monopoly of wage levels is as bad as monopoly of price levels. If a trade union can wrest monopoly profits from a monopolist, it is all right. The proper function of a trade union is to stop or prevent exploitation, and when it goes beyond, it is bad.

3. Merits and Demerits of Trade Unions. While trade unions have proved a boon to the workers, they have not escaped criticism. Trade unions have proved beneficial in the following ways :—

(*i*) A strong trade union is a guarantee of industrial peace and makes for the stability of industry. Any decision agreed upon collectively by the workers is bound to command obedience of, and respect among, the general body of the workers.

(*ii*) By insisting on standard rates of wages, they have helped in weeding out inefficient employers. The industry is thus put on a sound footing.

(*iii*) By mutual-help functions, they have considerably improved the efficiency of the workers. The levelling up of the wages has gone a long way in eradicating squalor and poverty from among the mass of workers.

(*iv*) The rise in labour costs, consequent on the increase of wages, has given a fillip to the introduction of labour-saving machinery. It has resulted in great technical advance.

On the other hand, the trade unions have been subjected to severe criticism, particularly due to some of their anti-social activities. The following are some of these charges :—

(*i*) By undue insistence on the payment of standard rates of wages, they have only levelled down the earnings of the superior workers.

(*ii*) They have adopted a hostile attitude towards rationalisation or improved methods of production lest some workers should have to go out of work. This attitude has retarded technical progress and reduced national dividend.

(*iii*) They often advocate a go-slow policy, which ultimately recoils on labour by reducing the national dividend and the volume of employment.

(*iv*) Intoxicated with their strength, the unions have sometimes launched strikes on flimsy grounds and done incalculable harm to themselves, the producers, and the community generally.

(*v*) They create artificial scarcity of labour by demanding that only union personnel should be employed.

On the whole, the unions have supplied a felt want and filled an important gap. It can easily be seen that in their absence the workers would have been ruthlessly exploited. If the masses suffer, does the nation gain.

4. Industrial Disputes. Industrial disputes between labour and capital have become more or less a normal feature of industrial life in capitalist countries. Such disputes either lead to a strike, which means refusal of workers to go to work, or to a lock-out, which consists in the employers refusing to allow workers to work. Strikes are more common than lock-outs since the aggrieved party, the worker, mostly takes the initiative.

Should the workers have a right to strike ? This is a controversial matter, especially in the case of public and quasi-public industries. Stopping of work in industries like railways, tram services, water and electric supply, paralyses the life of the community. As regards private industries, especially those that are not basic, the right to strike is usually conceded. Even in public industries, if there are to be restrictions on the workers' right to strike, justice demands that the grievances of the workers should be given a proper hearing and their rights properly safeguarded by public authority.

Industrial disputes leading to strikes in any case have serious consequences for the life of the community. The workers, the capitalists, and the consumers all have to suffer. The workers lose their wages, the employers their profits and their hold on markets, especially foreign markets, and the consumers have to go without the service supplied by the industry concerned. It is necessary for all concerned, therefore, to create conditions which will reduce to the minimum the chances of industrial disputes. Further, machinery must be created to tackle disputes when they occur. The first involves the investigation of causes of industrial disputes.

Broadly speaking, there are three causes which lead to industrial disputes and labour unrest in general :

(*i*) The desire of the workers for a higher standard of living. This involves the solution of the problem of an adequate wage. To meet this demand various modifications in the wage system have been suggested and tried in some countries, *e.g.*, the sliding scale system, various bonus systems, profit-sharing schemes, fixation of minimum wages, etc. (These devices are discussed in the sections that follow.)

(*ii*) The desire of the workers for greater economic security. This involves the problem of unemployment (which will be considered at the end of this chapter).

(*iii*) The demand of the workers for some participation in the management and control of industry. Several methods are suggested to achieve this end (which we shall consider in subsequent sections).

(*iv*) Disputes arise also on the question of working hours. These are, however, now fixed by legislation.

(*v*) Dismissal of their leader or a 'popular' worker ; non-recognition of the unions also sometimes causes disputes.

Let us now consider proposals for the prevention of disputes.

5. **Premium Bonus System.** The bonus system is devised to meet the defect of the time-rate system and the piece-rate system. When wages are paid according to time, the danger is that the worker will not put in his best. On the other hand, when wages are paid by the piece, the worker is likely to produce work of inferior quality in hasty execution. "The idea of the premium system," says Chapman, "of which there are many varieties, is that a standard output should be assented to, and that for any additional output lower piece-rates, perhaps progressively lower piece-rates, should be paid." This prevents the worker from overworking, since extra earnings diminish as time goes on. There is thus less chance of hurried or scamped work. In this way, defects of the piece-rate system are removed without sacrificing its advantages.

There are various kinds of the premium bonus systems. Sometimes a bonus is paid over and above an agreed time-rate, if the worker achieves the " efficiency rate " in respect of his output. In other cases, the efficiency rate is the minimum and a bonus is paid in respect of any output in excess of this minimum. In the former case, bonus is paid because of the time saved, in the latter because of the additional output produced. To give an example of the former, there is the Halsey system. Here the bonus takes the form of a payment equal to half the ordinary time-rate per hour for the whole of the time saved. Suppose the time allowed for a job is 10 hours and the rate is 10*d.* per hour. A worker who completes the job in 8 hours will receive $(10 \times 8)d.+$ a bonus of $(2 \times 5)d.$, *i.e.*, a total of 90*d.*[1]

6. Sliding Scale. Under the sliding-scale scheme, wages are made to vary according to the changes in the price of the product, or the cost of living or the profits earned by the industry. When wages are correlated with prices, certain basic prices are taken. If the price of the product rises, the wages are made to rise in a given proportion. If prices fall, wages are reduced but generally they are not allowed to fall below a certain level. Similarly arrangements are made as regards variations in the cost of living and profits.

The sliding-scale system according to prices is sometimes criticised on the ground that it exposes the labourer to a shrinkage of wages due to factors which in no way reduce profits. For instance, prices may fall due to improvements in the methods of production, cheapening of cost of carriage, reduction in business risks, etc. Reduction in wages under such conditions will not be justified. This merely proves that the basic rates should be revised frequently, if warranted by changes in business conditions.

As regards the sliding scale according to the cost of living, various objections have been raised against it. Among these are the imperfections of the index numbers, the fact that under such a system real wages tend to remain stationary, and that only lower paid workers benefit from it.

To these objections the supporters of the system reply that the purpose of the system is merely to keep the purchasing power of money wages constant. To increase real wages labour must press its claims through its organizations—the trade unions. The sliding-scale system at least adjusts money wages to changing prices and leaves the labourers free to force a rise in real wages when necessary. Moreover, the objections can be met by improving the index numbers and by providing full compensation for changes in the cost of living.

7. Profit-sharing. Under this system, the workers are given a certain percentage share in the net profits of the industry in addition to their usual wages. Various methods are adopted, the most common being the *cash bonus scheme.* Under it a certain proportion of net profits of the concern is distributed periodically among the workers.

Several advantages are claimed for this system, *viz.*, (*i*) that it reduces friction and creates goodwill between the employers and the workers ; (*ii*) that it binds the worker more closely to the firm ; and (*iii*) that it gives the worker incentive for greater output.

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[1] *See* S. E. Thomas, *Elements of Economics*, 1939, p. 341.

On the other hand, the system is criticised on various other grounds, *viz.* (*i*) that most of the benefit of additional output goes to the employer ; (*ii*) that it destroys the workers' solidarity ; (*iii*) that it checks mobility of labour ; and (*iv*) that profit-sharing should also involve loss sharing. But this cannot be done unless the workers have share in the management and the control of the industry.

8. Labour Co-partnership. This system closely resembles profit-sharing. The only difference is that in profit-sharing the workers are excluded from the control of the business; in co-partnership the workers are granted a limited share in control. This is done either by encouraging them to buy shares and thus getting the ordinary rights and responsibilities of the shareholders, or by allowing them to appoint one or more members as their representatives on the Board of Directors. This distinction has tended to disappear in recent years since committees of representatives of workers and employers have been increasingly set up for administering both the profit-sharing and the co-partnership funds. These committees also exercise wide powers in the details of work-shop management.

The various merits and demerits pointed out above in the case of profit-sharing also apply to co-partnership, with the additional defect that the worker is liable to lose both his savings and his employment in case the firm fails. Further, the labour directors are always in a minority.

The profit-sharing schemes have not solved the problem of industrial conflicts even in England, where they have been given a fair chance. The scheme is, however, still in an experimental stage and has been applied only in a narrow field.

9. Works Councils. One method of seeking co-operation of the workers in the control of business is that of Works Councils tried in England. The scheme was first formulated after the report of the famous Whitely Committee in 1917. Works Committees are organized in each firm, consisting usually of equal representatives of the workers and the employers. In some cases, only workers' representatives constitute these committees, but they have access to the management for discussing outstanding questions. Apart from these, district councils are organized, consisting of representatives of the trade unions and the employers in the industry concerned.

Works Committees, also known as Whitely Committees, succeeded to some extent in establishing peace and harmony between the workers and the employers. They created a greater sense of responsibility among the workers by giving them opportunities of influencing decisions in the conduct of business. Disputes in most cases were settled by voluntary discussion.

10. Minimum Wage.[1] Another method of reducing industrial friction is by ensuring adequate wages. By legislation a minimum wage is fixed below which it is an offence to pay a person. A minimum wage may be fixed in certain selected industries, usually called "sweated trades", or it may be introduced on a national scale. Let us take the case of the selected industries first. Suppose the State fixes a minimum wage in the "sweated trades". What will be the economic effect of such a policy on the worker, the employer, and the consumer ?

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[1] *See* G. J. Stigler, " The Economics of Minimum Wage Legislation " in the *American Economic Review*, June, 1946, pp. 358-63.

Suppose a minimum wage above the competitive level is fixed in one or few selected industries by law or by trade union pressure. The State can enforce the payment of the minimum wage, but it cannot force the employers to continue employing all the workers. The services of some workers may be dispensed with, and they may be replaced by more efficient workers. Thus the minimum wage scheme does not help those for whose benefit it is introduced. It merely leads to a re-distribution of labour.

There is also the danger that the minimum fixed by the State is treated as the maximum by the employers. There is thus a levelling down instead of levelling up of the wages.

If this higher wage can be shifted to the consumers, the price of the product will rise and no unemployment may result. But it may not be possible to raise the price either because of foreign competition or because of the availability of substitutes. In other words when the demand for the product is elastic, higher wages cannot be passed on to the consumers.

If the employer was earning only normal profits, as we have assumed, the burden will fall on profits, but it cannot fall on profits for long. If profits in such trades are depressed, new capital and enterprise will not flow into them though the present capital may be worked at lower profits for a time, if it is specialised and fixed.

Ultimately unemployment will surely result either because of contraction of the industry concerned or due to substitution of labour-saving machinery or labour-saving methods of production. "The higher the minimum wage," says *Stigler*, "the greater will be the number of covered workers who are discharged" There is a presumption that a minimum wage will adversely affect the volume of aggregate employment.

Unemployment, however, may not result if wages form only a small proportion of the total cost of production Then a slight raising of the price may compensate the employer for the loss incurred in paying higher wages.

Similarly unemployment may not result if the producer is a monopolist of the product concerned and the demand for the product is comparatively inelastic, *e g.*. supply of electricity, water, gas and other public utilities.

If the minimum wage fixed is below the competitive level, such trades will attract capital and enterprise due to abnormal profits enjoyed by them. Their demand for labour will increase. The new recruits, however, will avoid such trades. Partly due to the reduced supply of labour and partly due to increased demand, wages will rise to the competitive level.

If the "sweated trades" were previously giving abnormal profits the fixing of wage at the competitive level will not cause unemployment; it will mean a cut in the profits down to the normal level.

Thus it is not possible to lay down dogmatically what the effect of the introduction of the minimum-wage system on labour will be. It will be beneficial in certain circumstances and harmful in others. Each case will have to be examined on its own merits.

11. The National Minimum Wage. The fixing of a national minimum wage, (*i.e.*, a minimum for all the employments in the country) may have more serious results, especially if the wage fixed is above the competitive level. In this case, all loopholes may be stopped. There cannot be any redistribution of labour. Everywhere they must be paid this minimum wage.

To avoid its being counterbalanced by higher prices, the national minimum wage will have to be a real minimum wage and not a fixed money wage. It must be raised when prices rise.

Since no worker can be employed below this minimum a worker dismissed by one industry cannot find employment in another. Dismissed workers will thus be permanently unemployed unless they improve their efficiency, or unless they are prepared to conspire with the employer to work on a wage less than the minimum rather than face unemployment.

The burden cannot be shifted to the consumer by higher prices, because higher prices must be followed by higher wages to keep the real wages the same. Profits cannot be maintained by altering methods of production since the prices of labour-saving machinery and other devices will also rise. The result, therefore, will be wide-spread unemployment and contraction in all sorts of enterprise. This will check accumulation and investment of capital.

Moreover, the unemployed will have to be maintained from public funds, which will mean higher taxation and a still greater burden on industry and enterprise and still greater unemployment. Thus while productive activity will decrease, taxation, due to expenditure on the growing number of unemployed persons, will increase. The community will head towards nation-wide poverty by living on its past savings. The springs of economic activity will dry up if this policy is persisted in for long.

But it is not to be inferred that fixing of a minimum wage is necessarily detrimental to the interests of the workers. There are several circumstances in which it is bound to prove beneficial to them :

(1) In industries, where large capital has been sunk and expensive specialised plant is in use, the industrialists are helpless. They must carry on even if the wages impinge on profits. In such cases profits are squeezable. The workers can continue to receive a high wage without any immediate danger of unemployment arising out of the closing of the factories.

(2) It is possible that increased wages may be spent by the workers in such a manner that their efficiency is improved. This

will raise their marginal productivity and they will begin deserving the higher wage, if they did not deserve it before. The increase in wages will then cease to be at the expense of profits and there will be no danger of capital being driven out and consequent unemployment.

(3) It is very likely that the wokers, being poor and unorganised, may have been exploited by the employers. The raising of the wages will only be an act of belated justice, and there will be no reason for the employers to send them away.

(4) Finally, if the country maintains a system of unemployment benefits, the workers do not suffer. They receive the doles from the State all right, the burden of which falls on the wealthy tax-payers. The minimum wage thus proves an instrument for the transfer of wealth from the rich to the poor and makes for economic and social justice.

Fixing of the minimum wage can be advocated on some positive grounds too : (*a*) it will guarantee a reasonable standard of life for the workers, improve their efficiency and lift them out of the morass of poverty ; (*b*) it will curb the selfish and anti-social activities of unscrupulous employers who exploit labour and try to reshuffle labour to avoid paying a minimum wage fixed for certain trades ; (*c*) it will weed out inefficient employers who cannot earn enough to pay the minimum wage. The standard of industrial management will rise.

It must, however, be recognised that the minimum wage will make the wage system of the country rigid and inelastic so that it will be difficult to adjust costs to prices. There is also the difficulty of fixing the wage. If it is fixed too high, the competitive strength of the industry will be impaired or employment will diminish. If it is fixed low, it confers no benefit on the workers.

A social reformer must also bear in mind the social cost of such a piece of labour legislation. When an industry is overburdened with high-level minimum wage, cost of production will go up. There will be fewer goods available at higher prices. The exchequer will have to bear increased tax burden through doles, pensions and other poor relief measures. This is the debit side. On the credit side, we shall put the saving of children from being stunted and their increased earning capacity at maturity. When the general level of education and training goes up, the supply of skilled labour and trained business executives will increase. This will deprive, in course of time, such classes of people of the relative advantage that they may be enjoying, because increased supply will lower their earnings. But the benefit to the society is undoubted.

In India the Minimum Wages Act was passed in 1948. Under the Act, the Central or State Governments are empowered to fix minimum rates of wages payable to employees including clerks, in certain scheduled employments and the appropriate government can extend its operation to any other industry. Advisory Committees can be appointed for giving advice on wage fixation. The minimum rates so fixed have to be reviewed at intervals not exceeding five years. Almost all State governments have fixed minimum wages for employments mentioned in the schedule concerning industrial workers. As for fixing minimum wage for agricultural workers, an all-India inquiry was undertaken to collect the necessary data. Majority of States have fixed these wages.

However, the more important thing is not the fixing of a minimum wage, but a *fair wage.* It is not easy to define a fair wage. According to Marshall, a wage will be 'fair' if it is "on level with the average payment for tasks in other trades, which are of equal difficulty and disagreeableness, which require equally rare natural abilities and an equally expensive training." According to Pigou, a wage is fair in the narrow sense if it is equal to the rate current for similar workmen in the same trade and neighbourhood. In the wider sense, it is fair if it is equal to the predominant rate for similar work throughout the country and in generality of trades.

In India the Industrial Truce Resolution passed in the Industries Conference held in 1947 asked for the fixing of a fair wage. The Government accepted this resolution in their Industrial Policy Statement in 1948. A Fair Wage Committee was appointed which reported in 1949. On the basis of its recommendations a bill was drafted in 1950, but it lapsed. According to this Committee, the fair wage has to be somewhere between the minimum wage and the living wage ; its upper limit is determined by the capacity of the industry to bear it.

12. Settlement of Industrial Disputes. In spite of all efforts at avoiding occasions and causes of disputes, disputes may and do occur. It is, therefore, necessary to have some machinery for the settlement of disputes after they have arisen. There are usually two methods of meeting such situations : (*i*) Conciliation, and (*ii*) Arbitration.

(*i*) *Conciliation.* The essential feature of this method is that the settlement is reached by representatives of the workers and the employers themselves, with or without the mediation of an outside person. In India the Trade Disputes Act of 1929 empowered the Government to appoint a Conciliation Board to enquire into any dispute on the application of one of the parties. Such arrangements, however, do not eliminate all possibilities of strikes since there is usually a feeling of distrust, especially on the part of the trade unionists.

When the chairman is absolutely independent and a man of outstanding personality and integrity, Conciliation Boards have done excellent work.

(*ii*) *Arbitration.* In the case of arbitration, the question at issue is placed before an outside person for settlement. Arbitration may be voluntary as in England or compulsory as in Australia and New Zealand. Under voluntary arbitration, the dispute is referred to a Court of Arbitration. The award of the Court though generally accepted, is not binding on the parties. The report of the Court is published and the pressure of public opinion in many cases forces the parties to accept the decisions of the Court.

In Australia and New Zealand, the decision of the Court of Arbitration is binding on the parties. Strikes and lock-outs are prohibited by law and are punishable by fine or imprisonment. Compulsory arbitration may involve considerable hardships, especially in countries where the scope for alternative avenues of employment is limited. In Australia, since agriculture is outside the scope of the Arbitration Act, there is an outlet for capital as well as labour. " In fundamental industries," says Chapman, " upon the steady activity of which the whole community is dependent, for instance, transportation, there is most to be said for the system of compulsory arbitration."[1]

13. Unemployment. One of the frequent causes of labour unrest in modern industrial countries is the insecurity of employment. The spectre of unemployment constantly haunts the working classes. It has been described as the " shadow side of progress ".

Technically speaking, unemployment is defined as a state of affairs when in a country there are large numbers of able-bodied persons of working age who are willing to work but cannot find work at the current wage levels. People who either are unfit for work for physical or mental reasons, or do not want to work, *e.g.*, *Sadhus*, are excluded from the category of the unemployed.

Mere engagement in some productive occupation does not necessarily mean absence of unemployment. People who are only partially employed or are on inferior jobs, though they can do better jobs, are not adequately employed. It is called a state of under-employment which is equally bad for the prosperity of a country. Under capitalism, it seems, unemployment is inevitable. The best that can be done is to keep the number of the unemployed as low as possible.

14. Causes of Unemployment. Chapman distinguishes between *subjective* and *objective* causes of unemployment. Subjective causes are due to physical or mental defects of the individual, whether inborn or acquired, curable or incurable. The objective causes spring from forces over which the individual has no control. The following are some of these causes :

(*i*) *Trade cycles*. We shall study trade cycles in a separate chapter.[2] Suffice it to say here that business depressions recur at more or less regular intervals. During times of depression, business activity is at a low ebb and unemployment increases. Some people are thrown out of employment altogether, others are only partially employed.

(*ii*) *Seasonal demand*. Some economic activities are seasonal. During the slack season, the demand for labour is considerably reduced and unemployment is the result. Ice factories, for instance, work only during summer months. Employment in agriculture is seasonal. From three to five months in a year our agriculturist is in a state of enforced idleness.

(*iii*) *Industrial changes*. These imply the introduction of new methods and processes. But since methods of production usually change only slowly, many workers are not thrown out of employment simultaneously. If, however, such changes are rapid, large masses are thrown out of employment. During the Industrial Revolution in England, cheap goods invaded Indian markets and the workers engaged in the indigenous industries were thrown out of employment.

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[1] Chapman, *op. cit.*, p. 351.

[2] Chapter XLI below.

(*iv*) *Casual labour.* Casual labour is labour employed for short periods for doing odd jobs, such as labour in dockyards and similar places. Such people get employment only when trade is brisk. They are constantly leaving one job for another. " Many people who are prone to slackness like, or drift into, work of the casual kind and as many who take to it succumb to slackness, irregularity in the provision of work is encouraged."[1]

(*v*) *Social time-lag.* Social time-lag refers to the period which intervenes between a worker's leaving one employment and finding another. This period is longer in times of bad trade and shorter when business activity is on the upward swing. It also varies with the character of the labourer and the kind of his economic environment. It is quite possible to have a surplus of labour on the one hand and shortage on the other. This is due to the lack of proper contact between those who need workers and those who seek jobs.

(*vi*) *High wages.* We may add that unemployment may also be caused by trade union action. If trade unions succeed in enforcing wages not justified by marginal productivity, labour is bound to be dismissed sooner or later. The same will happen if a legal minimum wage is enforced which is above the productivity of the labour concerned, or beyond the capacity of the industry to bear.

(*vii*) *Growth of wealth.* According to Keynes, unemployment may also result from the growth of wealth in a country. With the increase of their incomes people tend to spend a smaller and smaller proportion on immediate consumption. This reduces the demand for consumption goods and hence the profit of the entrepreneur producing such goods. The entrepreneurs react by cutting down the volume of employment they offer to the factors of production including labour. This tendency can be counteracted if the larger savings lead to larger investments. But in wealthy countries opportunities of new investments are comparatively few. Hence new investments may not counteract the effect of the relative reduction in consumption. The result is that a portion of the labour force will be unable to find employment.

(*viii*) *Growth of population.* If population is growing faster than the stock of capital, there will be unemployment as is the case in India. There are no complementary resources to employ the increasing labour force.

15. Remedies for Unemployment. The best remedy for unemployment is economic planning. Under a planned economy there need be no unemployment. During the Great Depression (1929-34), there were over $2\frac{1}{2}$ million unemployed in the United Kingdom and over 4 millions in the U.S.A. In the planned economy of Russia, there was not a single unemployed person.

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[1] Chapman, *op. cit.*, p. 351.

Short of socialistic planning, however, various remedies can be adopted to keep unemployment down even in a capitalistic society. Among these are :—

(*i*) *Establishment of Employment Exchanges*. These institutions register the names of the unemployed persons, their qualifications and the record of the needs of the employers. Thus they bring people in search of work and those in search of workers together. Apart from this, some other advantages also flow from such institutions. They not only reduce the social time-lag but also furnish information which may enable the labourer to improve himself. They can also give advice on continuation of education or training after the school stage. Finally, they can be used to minimize casual labour, which can be helped to find more regular employment.

(*ii*) Unemployment due to trade cycles can be tackled in two ways : (*a*) by spreading the reduced demand for labour over all the affected trades, and (*b*) by making public demand for labour compensatory. As regards the first, demand for labour can be spread by operating the industry short-time, or by working with short-time shifts of labour. " It would seem better," says Chapman, " that all the operatives in an industry should do less and earn less than that some should earn nothing at all."[1] Some suggest that the employers should pay aggregate wages to the labour union concerned, which should provide regular wages to all the workers.

As regards the second, the demand for labour on the part of public authorities should be made to vary inversely with the demand from industry. Thus public works of various kinds (construction of public buildings, railways, roads and canals, etc.) should be started in times of depression when private enterprise is at a low ebb. This will not only give employment to those who are employed in such works but will also stimulate private enterprise by creating demand for goods on the part of those workers. This can start an upward swing in economic activity. Conversely, during times of busy trade the public authorities should, as far as possible, refrain from carrying out public projects. This involves careful planning so that special bodies (*e.g.*, national employment and development boards) should be created to plan out and execute compensatory public expenditure.

(*iii*) Seasonal unemployment can be tackled by dovetailing one seasonal trade with another. Further, stocks of goods may be made during the slack season or advance orders taken and thus employment spread out over the whole year.

As regards the unemployables, they can be helped in various ways : First, arrangements should be made for the reformation of drunkards, vagrants and other social parasites. Secondly, provision should be made for the treatment of those who have become unemployable through physical unfitness which is curable.

Mitigation of distress of the unemployed is another problem. This brings us to the broader problem of social insurance which covers not only unemployment but other disabilities to which a worker and his family are exposed.

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[1] *Op. cit.*, p. 358.

Unemployment problem has received attention in the five-year plans in India. India's population is estimated to be increasing at the rate of 4½ million persons in a year. Of this 40% are additional job seekers. Hence 9 million jobs had to be created during the First Five-Year Plan. But according to Shri C.D. Deshmukh, the total employment effect of the First Plan might have been only 5 million jobs. The total number of the unemployed registered with the Employment Exchanges continued to increase throughout the plan period. Hence the growth of employment opportunities lagged behind the increase in labour force.

The objective of the Second Plan is to provide employment opportunities outside agriculture on an adequate scale and to create 10 million jobs for the purpose. Although the plan is likely to make significant contribution to the solution of the unemployment problem, yet it will continue to require good deal of attention during the operation of the plan. The problem is so deeply rooted structurally in the Indian economy. The Planning Commission concludes, " In spite of concerted efforts for the mobilisation of available resources and their optimum utilisation as proposed in the Second Plan, the impact on the two-fold problem of unemployment and under-employment will not be as large as the situation demands.''

16. Social Insurance. Social insurance may be defined in the words of Cohon, as " that part of the total field of insurance in which the risks or hazards covered result from the inability of the workman either to make a wage contract of a kind which will enable him to maintain a satisfactory standard of living for himself and his family or to carry through his part of the contract owing to physical incapacity.'' The chief of such risks arise out of (*a*) temporary inability to make a living due to accident, disease, ill-health or unemployment, (*b*) permanent incapacity due to disablement or old age, and (*c*) death involving unprovided widowhood and orphanhood.

Social insurance can be defined as " a co-operative device, which aims at granting adequate benefits to the insured on the compulsory basis, in times of unemployment, sickness and other emergencies, with a view to ensuring a minimum standard of living, out of a fund created out of the tripartite contributions of the workers, employers and the State, and without any means test, and as a matter of right of the insured ''.

From the above statement, we can easily discover the main ideas underlying social insurance. They are : (*i*) Social insurance is provided on a compulsory basis ; (*ii*) it is contributory by all parties concerned ; (*iii*) benefits are granted as a matter of right and the beneficiaries' self-respect is not injured ; and (*iv*) to keep the benefits within limits, they are intended to maintain only minimum standard of living ; moreover, the workers' contribution is to be within their paying capacity. It should be remembered that social insurance can help the individual in an emergency, but cannot prevent the emergency from arising.

The various forms of scial insurance prevailing in Great Britain, which has made probably the greatest advance in this connection are : (*i*) Unemployment Insurance, (*ii*) Health Insurance, (*iii*) Old-age Pension Scheme, and (*iv*) Widows' and Orphans' Pension Scheme.

The progress that the idea of social insurance had made in India will be given in the following section on soical security.

17. Social Security. The term ' Social Security ' has recently become current in the context of the activities of modern States. It is a much wider term than social insurance. Besides social insurance discussed above, it also includes what is known as social assistance. Social insurance is meant for the benefit of those who pay contributions and can claim it as a matter of right. But social assistance is provided free by the State out of its own funds. In social insurance there are no means tests, but social assistance is granted to those who fulfil certain prescribed conditions.

There are certain risks which are best covered by social insurance, whereas there are certain contingencies which are suitable for social assistance. Generally speaking, if there is an apprehension of the common fund being misused or where exaggerated claims are likely to be put forward, social insurance is the best. The risks of unemployment, sickness and old age are usually provided for by means of social insurance, whereas social assistance is confined to benefits of hospitals, sanatoria, maternity, child welfare, school health services, etc. The social security system of a country is made up of the social insurance and social assistance schemes.

The idea of social security originated in the realisation by the State of its responsibility to provide its citizens adequately against certain contingencies. Formerly the State contented itself by providing its poor citizens against want and poverty. But " Want, " says Sir William Beveridge, "is only one of the five giants on the road of reconstruction, and in some ways, the easiest to attack. The others are Disease, Ignorance, Squalor and Idleness." Social security aims at providing protection against these big and dangerous giants. The International Labour Organisation is responsible for the keen interest taken in, and the progress of, social security in different States.

The Second World War roused the conscience of statesmen in various countries and they began thinking of providing social security to all citizens, not merely workers, on a very comprehensive and liberal scale. In the post-war era, it was considered necessary to imporve the lot of the common man and rid him of the various anxieties arising out of his dependence and poverty. Accordingly, very ambitious schemes of social insurance and social security came to be formulated in the U.S.A., Great Britain, Canada, New Zealand and many other countries who cared for the welfare of the common man. The Beveridge Scheme for Great Britain, the Marsh Report on social security for Canada and the Murray Dingell Bill of the U.S.A. deserve special mention.

In India social security schemes have not made as much progress as we would desire. This is so on account of the continental dimensions of the country, its huge population and the appalling poverty of the people standing in the way of contributory schemes. For a long time, therefore, social insurance schemes aroused only an academic interest. The publication of the Beveridge Scheme created in India wide-spread interest in such measures. The advent of independence, the growth of consciousness among labouring classes and the spread of communistic ideas drew attention to the urgent necessity of adopting in India also some social security measures. In India wages are low, the incidence of disease is high, unemployment is wide-spread and the standard of living is unspeakably poor. The entire income of the worker is hardly sufficient to buy him the daily necessities of life. It is impossible to expect him to save and provide himself against the various contingencies. This makes a social security scheme for India a stark necessity.

None of the contingencies which a worker has to face in his lifetime have been yet fully covered. No doubt, Acts have been passed providing for compensation for industrial accidents, maternity benefits and recently schemes of health insurance. But by no stretch of imagination can they be called social security measures. A beginning was made in this direction by the passing of the Employees' State Insurance Act of 1948 and the Employees' Provident Fund Act of 1952. The former is financed by the Employees' State Insurance Fund, which is built up by contributions from employers, employees and grants from the Central and State Governments. The Central Government has to make an annual grant for the first five years to cover two-thirds of the administrative expenses and the State Governments are to share the cost of medical expenses. A scale of weekly contribution by the employees and the employers has been laid down. Provision has been made for benefits in the case of sickness, maternity disablement, aid to dependants and medical aid.

According to the annual report of the Employees' State Insurance Corporation for 1956-57, about 13 lakh employees—about half of the total insurable population of factory workers—in the country were covered by the Scheme. The Employees' Provident Fund Act provides for a contribution of one anna in the rupee (*i.e.*, 6¼ %) both from the employers and from the employees. The rate was raised to 8⅓% in 1958. The Act applied in the first instance to factories which employed 50 or more persons engaged in six principal industries. By virtue of an amendment in December 1956, it can be extended to non-factory establishments. It has been extended to cover plantation employees. With effect from May 31, 1957, the limit of eligibility has been raised from a salary of Rs. 300 to Rs. 500 per month inclusive of dearness allowance and other concessions. The Act covers (in 1958) 28 lakh employees in 6,215 factories/ establishments.

It is hoped that these modest measures of social security will pave the way for a very comprehensive social security scheme.

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CHAPTER XXVIII

INTEREST

1. Gross and Net Interest. We now turn to the reward of capital, the third factor of production, *viz.*, interest. Interest is the price paid for the use of loanable funds. It is normally calculated as a percentage on the money borrowed or lent. Much of what is called interest is not the price of the service of capital as such. What people generally call interest is really gross interest. Pure interest is only a small proportion of gross interest as explained below. Variations in interest rate are largely explained by this fact. Pure interest tends to equality in different employments, provided competition is free and perfect.

The total amount which the debtor pays to the creditor is known as Gross Interest as already indicated. All that the borrower pays to the lender is not pure or net interest, *i.e.*, the price paid for the services of capital. It is mixed up with so many other elements, of which Pure or Net Interest is only one. Gross interest consists of the following elements :—

(*a*) *Pure Interest.* This is a payment only for the services of capital as such or for the money borrowed.

(*b*) *Insurance against Risk.* The lender is exposed to risk when he lends money. A certain amount must be paid to him to cover these risks. These risks are of two kinds : (*i*) personal risks due to the unreliable character of the borrower himself, and (*ii*) trade risks. Trade risks are due to the varying fortunes of the business in which the money is invested. Thus the lender may fear that either the borrower may refuse to pay back his money and the interest on it or he may lose the money in his trade. The greater the risk of this kind, the higher will have to be the insurance money that the lender will expect before he is willing to lend.

(*c*) *Wages of Management.* A part of the payment may be due to the wages of management. The lender has to keep accounts and to arrange for new loans for short periods. Money-lending is his whole-time job.

(*d*) Finally, there is the return for inconvenience. When a man lends money, he loses command over it for a period. He is unable to make use of it himself if he wants to. Favourable opportunities of its employment may slip by. Inconvenience is of two types. The lender may not get back the money when he needs it and he may have to borrow from others on interest. Or he may get the money when he cannot find for it some safe and lucrative investment so that the money lies idle and he loses interest. He must, therefore, compensate himself for such losses. Hence, he charges something extra over and above pure or net interest.

Keeping these facts in mind, it will become clear why the village money-lender's rates are high in spite of competition among the lenders. The risk and inconvenience involved are great. Similarly, the pawn-brokers seemingly charge very high rates when calculated on an annual basis. But they have to undergo lot of trouble in their business in keeping small individual accounts, etc. This also explains why governments, especially those with sound financial traditions, can borrow at extremely low rates of interest. Here the risk and inconvenience to the lender are negligible and the interest paid is mainly "pure interest". The return on British Consols (long-term British Government Securities) is a classical example of the pure rate of interest.

2. Differences in Interest Rates. There is an element of monopolistic competition in the money market inasmuch as different borrowers are charged different rates of interest. It may be noted, however, that pure interest tends to be the same, if calculated over the same period of time in the same money market. The actual differences that prevail are differences in gross interest. In other words, they are due to differences in the degrees of risk involved and inconveniences suffered by the lenders.

Pure interest may be different in different investments, when the market is not the same owing to the following reasons :—

(*a*) *Differences due to distances.* People are usually more willing to invest their capital nearer home than at a long distance. This may create differences in supply and demand due to the comparative immobility of capital.

(*b*) *Differences due to time.* If people have to part with their money for a long period, they expect higher rates even though risks and other factors are the same. Of course, if money is lent for very short periods and has to be re-lent again and again, the inconvenience of management will increase gross interest. But that will not be net interest.

(*c*) *Differences due to the amount of the loans.* It is generally seen that the rate of interest varies inversely with the amount of the loan. The rate decreases as the amount of the loan increases, and *vice versa.*

Differences in gross interest may, in addition to the causes already considered, be due to :—

(*i*) *Differences in social esteem.* A person with better reputation for integrity can borrow at lower rates. This is partly due to the element of lower personal risk already considered.

(*ii*) *Differences in productivity.* Where capital can earn greater reward for the producer, he will be willing to pay higher interest. Such trades are usually more speculative and higher interest can be attributed to higher risks. Moreover, *under perfect competition, as we shall see, marginal productivity of capital and hence the pure rate of interest, tend to equality.* Higher rewards in particular employments, if not justified by greater risks or inconvenience, tend to disappear through force of competition. But if competition is imperfect, such differences may persist.

Productivity of capital may differ in different countries. In new States, for instance, the demand for capital is great while the supply is very limited. Capital thus has a high marginal productivity, and interest is high. This is due to the immobility of capital over distances as already noted. Partly it is due to greater risk. In the latter case, it is *gross* interest which will be higher, not *net* interest.

Thus ultimately differences in interest rates can be reduced to differences of inconvenience or risks of lending except in cases where we are not dealing with the same market. *Pure interest tends to be the same in the same market.*

To sum up : "The interest rate charged on individual business is usually determined in personal negotiation between bank and borrower. It reflects such attributes as the borrower's size and general credit standing, his access to alternative credit sources, the size and maturity of the loan, the character of the borrower's business, the value to the bank of his deposit account and of other business relationships, and the nature of the security if any, to be pledged. Certain other factors not related directly to the borrower of the loan but rather to the lending bank or perhaps the banking structure can also be shown to have some effect on interest rates charged for bank business loans. These are the size of the lending bank, the size of the centre in which the bank is located, and the area of the country where the loan was made."[1]

THEORIES OF INTEREST

3. **Productivity Theory of Interest.** Several theories have been put forward by way of explanation of interest. Some older economists thought that capital was productive of goods in the same sense as land is productive of crops. They held that interest was paid because production with the aid of capital was greater than without it. Capital no doubt is productive, but not in the same sense as a flock of sheep or fertile land is productive. Capital is productive in the sense that labour, assisted by capital, produces more than without capital. A fisherman with a net can catch more fish than without it. A farm labourer with a tractor can produce more than without a tractor.

But physical productivity of capital goods does not explain interest. If people were willing to lend unlimited amounts of money *without interest*, business would expand up to a point where the falling price of the product would simply cover other charges (without any interest) in making thereof. *Interest would not be a cost.* But interest is a cost which every entrepreneur must reckon with. Hence price in the long run must cover all costs *including interest.* Since demand for capital, when it is free of interest, must exceed the supply of it, interest is bound to emerge. Even if some lenders were willing to lend without interest, prevalence of competition would ensure that it would be advanced only to those who would pay interest rather than those who would not. *Hence it is scarcity rather than productivity which explains interest.*

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[1] Richard Youngdahl on "Structure of Interest Rates," *Federal Reserve Bulletin*, July 1947.

The productivity theory does not explain how interest rates are determined. If interest depended merely on productivity (not marginal productivity), interest rates should vary in proportion to the productiveness of capital In actual fact, pure rate of interest tends to be the same in the same market. Further, if capital helps labour to produce more, how much of this extra production is due to capital and how much to labour, since capital without labour produces nothing ? Then what about loans for consumption purposes ? They are not productive, but interest has to be paid on them all the same. As we shall see later, these objections can be overcome, if we talk in terms of marginal productivity and not mere productivity of capital.

4. Abstinence or Waiting Theory of Interest. Another theory of interest is the Abstinence Theory. The Productivity Theory tries to explain interest from the side of demand ; the Abstinence Theory approaches the problem from the side of supply. It was Senior who first pointed out that saving involved a sacrifice or "abstinence" as he put it. Saving was an act of abstaining from consumption. Since to abstain was painful, it was necessary to reward people for this act. This reward was in the form of the interest paid to those who saved rather than consumed their incomes, or a part of their incomes.

The idea of abstinence was widely criticised on the ground that it suggested positive discomfort while the rich people, who are the main source of capital, save without the least inconvenience. Thus it was that Marshall substituted the term "waiting" for "abstinence". Saving implies waiting. When a person saves, he does not refrain from consumption for all time ; he merely postpones present consumption to a future date. Meanwhile he has to wait. But since most people do not like to wait, an inducement is necessary to encourage this postponement of consumption. Interest is this inducement.

Some "waiting", however, may be forthcoming without any inducement in the way of interest payment. Other people will wait even with a negative rate of interest. But aggregate of savings thus made will not be adequate to meet the total demand for capital. Interest must be paid to induce many more people to save in the case of whom waiting does involve inconvenience. The rate of interest must be high enough to bring forth the marginal increment of saving or waiting in order to meet the aggregate demand for capital. The rate of interest will be fixed at a level at which the supply of waiting will be equal to the demand for it.

This theory has a considerable element of truth in it, but it does not clearly analyse the forces acting on the side of demand for capital.

5. The Austrian or Agio Theory of Interest. It is also called Psychological Theory. First advanced by John Rae in 1834, this theory was given its final shape by Bohm Bawerk of the Austrian School of economists. It became popular later among some American economists, like Fisher, with slight modifications.

The gist of the theory of Bohm Bawerk is that interest arises because men prefer present goods to future goods, and that, therefore, there is an 'agio' or premium on present goods One bird in hand is worth two in the bush. The present gratification is attached greater importance than the future satisfaction. In other words, future satisfactions when viewed from the present undergo a discount. Interest is this discount which must be paid in order to induce people to lend money or postpone present satisfactions to a future date. Interest is intended to equate future satisfaction with present satisfaction. To induce a person to part with Rs. 100 now, it is not enough to give him a promise of the return of only Rs. 100 after a year The borrower must pay more, otherwise the lender will feel that he is a loser. The human mind is so constituted that there is commonly an under-valuation of the future purchasing power as compared with the present purchasing power.

Why do people prefer present satisfaction to future satisfaction ? Bohm Bowerk gave three reasons for this fact. One is the "prospective underestimate for the future '. The future is less clearly perceived than the present. It is uncertain. In the second place, present wants are felt more keenly than the future wants. The result is that the demand for present goods is greater than that for future goods. Thirdly, present goods possess ' a technical superiority over future goods.'' This is so because the passage of time allows the use of more roundabout methods of production, which are more productive.

6. Fisher's Statement of the Theory. Fisher emphasizes the fact of ''*time preference* ' as the central point in the Theory. Individuals prefer present satisfactions to equally certain future satisfactions. They are thus impatient to spend their incomes now. The degree of impatience depends upon the size of the income, the distribution of income over time, the degree of certainty regarding its enjoyment in the future and the temperament and the character of the individual. Thus people with larger incomes are likely to have their present wants more fully satisfied and will thus discount the future at a lower rate than poorer people.

As regards distribution of income over time, three kinds of situations may be imagined. The income may be uniform throughout one's life, or increase with age, or decrease with age. If it is uniform, the degree of impatience to spend (*i e.*, the rate of discounting the future) will be determined by the size of the income and the temperament of the individual. If the income increases with age, it means the future is well provided for, and the tendency will be to discount the future at a higher rate. If the income decreases with age, the converse will be true, *i.e.*, the future will be discounted at a lower rate.

As for the degree of certainty, it is clear that the greater the certainty of future enjoyment of income, the smaller the degree of time preference or the rate of discounting the future, and *vice versa.*

Finally, the character of the individual will also influence this time preference. A man of forethought will discount the future at a lower rate compared with a spendthrift. The rate of time preference is also influenced by expectation of life. If a man expects to live long, his preference for purchasing power in the present will be comparatively low. Similar will be the case of a man who desires to leave behind a handsome patrimony.

The rate of time preference of an individual also depends on the proportion of his income that he is asked to lend. The larger the amount of loan, the higher must be the rate of interest, because it entails a greater sacrifice of liquidity on the part of the lender.

Thus the rates of individual time preference, after having been determined in this way, tend to become equal to the rate of interest. An individual with a higher rate of time preference compared with the market rate of interest tends to borrow money in order to satisfy his more pressing wants. If his rate of time preference is lower than the market rate of interest, he will lend to the market and make a gain thereby. Thus the individual will vary his income-stream by borrowing or lending. This process will tend to equalise the rate of interest with the rate of time preference.

7. **Neo-Classical Theory.** The Neo-Classicists were of the view that the rate of interest performed the same function with regard to capital as price performed in the case of commodities, *viz.*, of bringing about an equilibrium between demand and supply. What happens in the case of a commodity ? Suppose demand for wheat is greater than the supply thereof. Price will rise and the less urgent purchasers will be warned off. In this way demand will be brought down to the level of available supply. Now suppose the supply is greater than demand. The price will fall and stimulate demand so that the available supply is taken off the market. Thus the price rises or falls to make demand and supply equal to each other.

This is precisely what the rate of interest does. If demand (*i.e.*, investment) is greater than the supply (*i.e.*, savings), the rate of interest will rise. It will check investment so that it is reduced to the level of savings. Thus I (investment) and S (savings) are equalised. It may be noted that a persistent increase in demand will ultimately be met by new supplies of capital. But that will take time. The situation is immediately met only by a rise in the rate of interest. Hence it is merely a change in the interest rate which has equalised demand and supply. If, on the other hand, savings are greater than investment, the rate of interest will fall. It will tend to discourage savings on the one hand and stimulate investment on the other, so that I and S are brought to equilibrium. It is in this manner that the rate of interest performs the equilibrating function between savings and investment. Hence the rate of interest tends to settle at a level at which savings and investment are equal.

This theory has been criticised on the following grounds : (*i*) Some savings are involuntary, and as such independent of the rate of interest. In the equilibrating process, the influence of the rate of interest on savings is exaggerated. (*ii*) The most fundamental objection put forward by Keynes against the theory is that it assumes that the level of incomes of the community remains constant, which is not a fact. The theory is correct if the income *is given*. For instance, a higher rate of interest will induce larger savings out of a *given* income, but it ignores the effect on incomes (which are the real source of savings) of this higher rate. A higher rate of interest will check investment and reduce the level of incomes, which will, in turn, diminish the community's capacity to save. According to Keynes, it is not the rate of interest which performs the equilibrating function but the level of incomes. He says that I (investment) and S (savings) are always equal and this equality is brought about by changes in the level of incomes and not by changes in the rate of interest.

8. Keynes's Theory of Interest—Liquidity Preference. In his epoch-making book, *The General Theory of Employment, Interest and Money*, the late Lord Keynes gave a new view of interest. According to him "interest is *the reward for parting with liquidity* for a specified period."[1]

A man with a given income has to decide first how much he is going to consume and how much to save. The former will depend on, what Keynes calls, the *propensity to consume.* Given this propensity to consume, the individual will save a certain proportion of his given income. He now has to make another decision. Should he hold his resources in the form of money, *i.e.*, immediate command over goods and services, or general purchasing power at some future date ? How much of his resources he will hold in the form of ready money (cash or non-interest-paying bank deposit) and how much he will part with or lend will depend upon what Keynes calls his "*liquidity preference*". The smaller the desire to lend, the higher the liquidity preference. As Meyer says, "Liquidity preference is the preference to have an equal amount of *cash* rather than of *claims* against others." If I prefer to have an equal amount of goods and cash now to having the same amount in future, the rate of my preference will be *positive.* But if I prefer to have an equal amount in the future rather than in the present, it is called a *negative rate of preference.*

Liquidity preference of a particular individual depends upon several considerations. The question is : Why should the people hold their resources liquid or in the form of ready money, when they can get interest by lending such resources ? This is due to a variety of reasons : (*i*) Individuals hold cash in order "to bridge the interval between the receipt of income and its expenditure". This is called the '*Income Motive*'. Most of the people receive their incomes by the week or the month, while the expenditure goes on day by day. A certain amount of ready money, therefore, is kept in hand to make current payments. This amount will depend upon the size of the individual's income, the interval at which the income is received and the methods of payments current in the locality.

(*ii*) The business man and the traders also have to keep a proportion of their resources in ready cash in order to meet current needs of various kinds. Here money is intended to serve as a medium of exchange. This Keynes calls the '*Business Motive*' for keeping money.

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[1] *Ibid.*, *p.* 167.

These two motives can be grouped under one, *viz.*, the *'Transactions Motive'*. since transactions are carried on both by the individual consumers and entrepreneurs.

(*iii*) Cash is also kept in order to meet expenditure due to unexpected contingencies. It may not be possible on such occasions to recall loans, or such a recall may involve a loss, *e.g.*, securities may have to be sold at a loss. This is called by Keynes the *'Precautionary Motive'*, for keeping money.

(*iv*) There is another reason for holding money. Money has to be piled up gradually before it can be conveniently invested in lump sum. For some time, therefore, money has to be kept in hand. Similarly, holding of cash becomes inevitable in transition periods, when an investor has sold off one type of asset and is looking for an alternative investment. This is known as the *'Financial Motive'* for holding money.

(*v*) Finally, cash is held by some people for what Keynes calls the *'Speculative Motive'*. There may be expectation of a future rise in the rate of interest, and the prospective lender may be waiting to take advantage of such a rise. Uncertainty, which dominates the business world, makes investors and financial institutions hesitant and compels them to maintain a state of liquidity, as happened during the Great Depression of the 1930's.

The notion of holding money for speculative motive is a new typically Keynesian idea. No doubt, this represents a store of value under the precautionary motive, but it is kept for a different purpose. The cash held under this motive is used to make speculative gains by dealing in bonds[1] whose prices fluctuate. If bond prices are expected to rise, which in other words means that the rate of interest is expected to fall, business men will buy bonds to sell when the price actually rises If, however, bond prices are expected to fall, *i.e.*, the rate of interest is expected to rise, business men will sell bonds to avoid capital losses Nothing being certain in this dynamic world, where guesses about the future course of events are made on precarious bases, business men keep cash to speculate on the probable future changes in bond prices (or the rate of interest) with a view to making profits.

The amount of money held under this motive will, therefore, depend on the rate of interest. If the rate of interest is expected to fall (*i.e.*, bond prices are expected to rise). business men will buy bonds to sell when their price rises. In other words, the demand for cash for the speculative motive will be less at a higher rate of interest than at a lower one. To be more clear, more will be held at a low rate of interest and less will be held at a high rate of interest. In algebraic terms, demand for money under this motive is a decreasing function of the rate of interest. This is clear from the following diagram.

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[1] All securities and other such papers as yield a fixed and known amount of interest over a period of time are known as bonds.

Along OX is represented the speculative demand for money (called 'inactive balances' by Keynes) and along OY the rate of interest. The liquidity preference schedule *lp* is a downward sloping curve towards the right signifying that the higher the rate of interest, the lower the demand for speculative motive, and *vice versa*. The schedule becomes more elastic towards the right and at very low rates of interest, bond prices are very high and a slight fall in the rate of interest induces a much higher demand for the speculative motive because bond prices are expected to fall any moment.

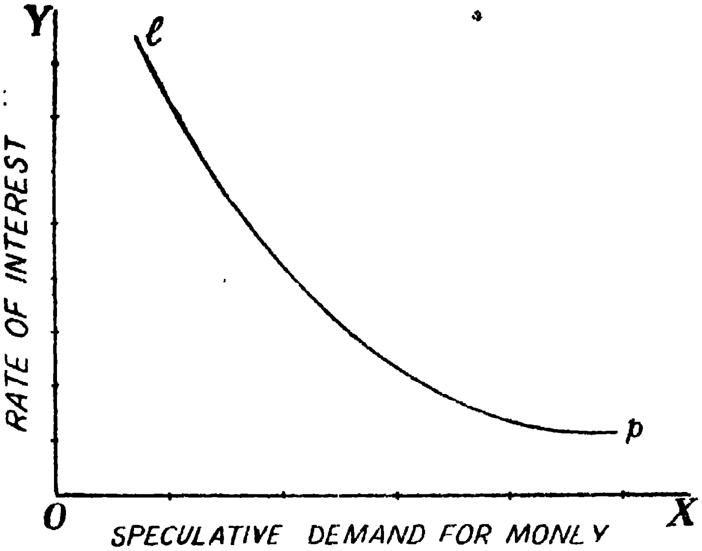

Fig. 59.

These five motives between themselves determine the demand for money. Keynes calls the money held under the first three motives as 'active balances' and that held under the last motive as 'inactive balances'. The reasons for this are obvious. Active balances are mainly the function of income. whereas inactive balances are the function of rate of interest (as demonstrated above). Let us call the former as M_1 and the latter as M_2. The total demand for money at any particular time, then, is constituted of M_1+M_2.

As for the supply of money, it is determined by the policies of the Central Bank of the country concerned. The total supply of money consists of coins plus bank notes plus bank deposits. Let us call it M.

Now we have got a clear picture of the demand for money (to hold) and the supply of money (to hold). Let us see how the rate of interest is actually determined. Study the diagram on the next page.

The figure on the left represents the active balances *i.e*, M_1. It has been shown to be a function of income. As income extends from Y_0 to Y_1, the demand for M_1 increases from OA to OA', and so on. M_1 is not influenced by changes in the rate of interest except when the rate of interest is very high—beyond i_3 in our diagram. That is why after i_3, Y_0, Y_1, Y_2,......Y_7 have been shown to be backward sloping, *i.e.*, a rise in the rate of interest reduces demand for M_1, income remaining the same.

The figure on the right represents the inactive balances, *i.e.*, M_2.

The two figures taken together reveal the following points :

(*i*) Given the supply of money (OA+OB) and given the income (Y_0), *the higher the liquidity preference, the higher the rate of interest ;*

and the lower the liquidity preference, the lower the rate of interest. In our diagram, at Y_0 level of income, the supply of money being OA+OB, the rate of interest is i_0 when liquidity preference is *lp*.

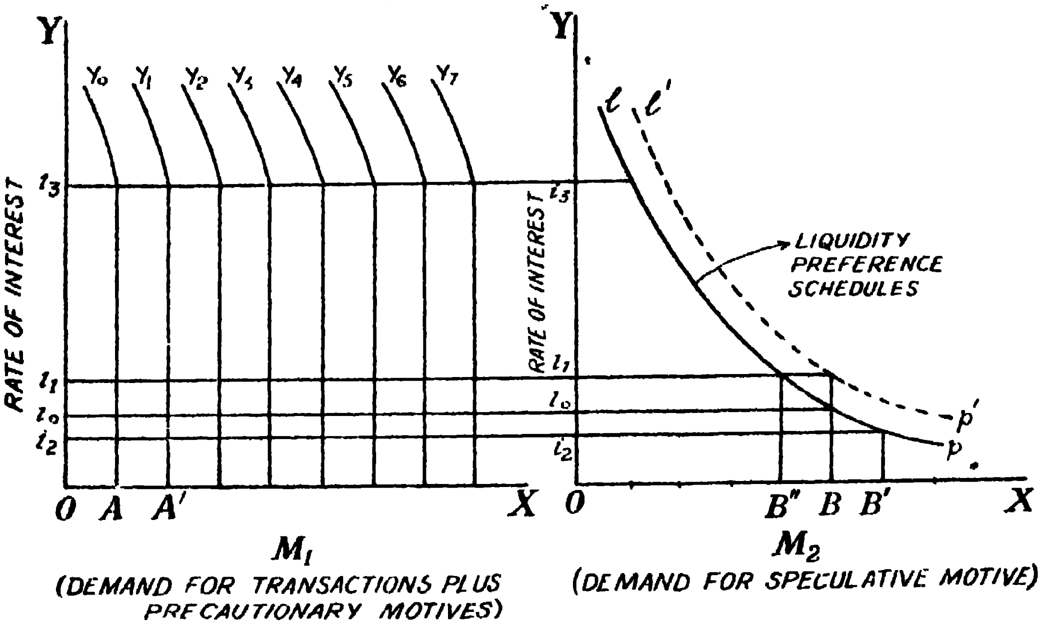

Fig. 60.

When the liquidity preference rises to *l'p'*, the rate of interest rises to i_1, *other things remaining the same.* Similarly, when the liquidity preference falls, the rate of interest will fall, *ceteris paribus.*

(*ii*) Given the liquidity preference (*lp*), and given the income (Y_0) *the greater the supply of money, the lower the rates of interest ; and the smaller the supply of money, the higher the rate of interest.* In our diagram above, when at Y_0 level of income, liquidity preference being represented by *lp*, supply of money rises from OA+OB to OA+OB', the rate of interest falls from i_0 to i_2. Similarly, a diminution in supply will raise the rate of interest, *other things remaining the same.*

(*iii*) Given the liquidity preference (*lp*), and given the supply of money OA+OB *the higher the income, the higher the rate of interest ; and the lower the income, the lower the rate of interest.* In our diagram above, when at OA+OB supply of money, liquidity preference being represented by *lp*, income rises from Y_0 to Y_1, the rate of interest rises from i_0 to i_1. This happens because of a reduction in the supply of money left to meet the speculative motive. Total supply of money remaining OA+OB, a rise in income from Y_0 to Y_1 increases the demand under M_1 by AA'. This much amount is withdrawn from M_2, *i.e.*, BB" is taken away. This raises the rate of interest. Hence changes in income influence rate of interest through changes in the relative demand for money for M_1 and M_2.

To sum up, we find that according to the liquidity preference theory, rate of interest is determined by liquidity preference on the one hand, and the supply of money on the other. *Assuming income to be constant,* liquidity preference, or the demand for money, refers to the demand under the speculative motive alone. As such, the higher the liquidity preference, given the supply of money, the higher the rate of interest and *vice versa* ; the greater the supply of money, given liquidity preference, the lower the rate of interest, and *vice versa*. It is, thus, the demand for money under the speculative motive that in conjunction with the supply of money, determines the rate of interest. When income is brought in, the demand for money refers both to M_1+M_2

9. **Criticism of Keynes's Theory**. Keynes explained interest in terms of purely monetary forces and not in terms of real forces. He agreed that the marginal net product of capital tends to become equal to the current rate of interest but the rate of interest is not *determined by* the marginal net product. According to him interest is not reward for saving, but for parting with saving. It is not the rate of interest which equalises saving and investment. Equality is brought about through changes in the level of incomes. One difficulty of the theory arises from what Keynes means by "money". Money, he says, is co-extensive with bank deposits. In his discussion with Robertson, on the other hand, he seems to exclude credit from this category.

Secondly, Keynes makes the rate of interest independent of the demand for investment funds. In fact it is not so independent. The cash balances of the businessmen are largely influenced by their demand for capital for purposes of investment. This demand for capital being dependent upon the marginal productivity of capital, the rate of interest is not determined independently of the marginal efficiency of capital.

The theory is to some extent analogous with the Agio Theory of Bohm Bawerk. What Bohm Bawerk calls "prospective underestimate of the future" and Fisher calls "time preference" Keynes calls "propensity to consume". Both in effect mean preferring command over present goods to that over future goods. One regards interest as a premium on present goods, the other as a reward for parting with liquidity. In substance both mean the same thing.

But while Bohm Bawerk indirectly recognises the importance of productivity of capital as a determining factor, Keynes does not. According to him current investments are too insignificant in relation to total existing capital to be regarded as determinants of interest. Rather, they are determined by the interest.

On the whole, therefore, Keynes's Theory is inadequate to explain interest. It takes only the monetary phenomena into consideration and does not clearly bring out the action of real forces (of supply of and demand for capital as distinct from loanable funds) behind the monetary phenomena. Let us examine the forces acting behind supply of, and demand for, capital.

10. **The investable Funds Theory of Interest.** This theory has been explained by J.S. Bain in his book *Pricing, Distribution and Employment*.[1] According to him, the rate of interest during a given period is determined at the equilibrium between aggregate demand for and aggregate supply of loanable or investable funds. The de-

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[1] *Ibid.*, 1948, pp. 384-95.

mand for such funds consists of demand for investment and for liquid balances, and the supply of investable funds consists of supply from savings and from liquid balances.

The rate of interest need not be such as to make saving and investment equal. The discrepancy between saving and investment is accounted for by hoarding or dishoarding, as the case may be. If, for instance, saving exceeds investment, the excess will be hoarded ; if, on the other hand, investment is greater than saving the difference must have come out of hoards.

We can have in any time period, three sets of demand and supply schedules : (1) Investment demand schedule (dotted line) representing amounts demanded for investment and for consumption, and supply schedule *S* (dotted line) representing savings available for investment and hoarding. There will be one rate of interest at which *I* (investment) and *S* (saving) are equal This rate r_1M_1 is shown by the intersection of the investment curve *I* and the saving curve *S* in the diagram given here.

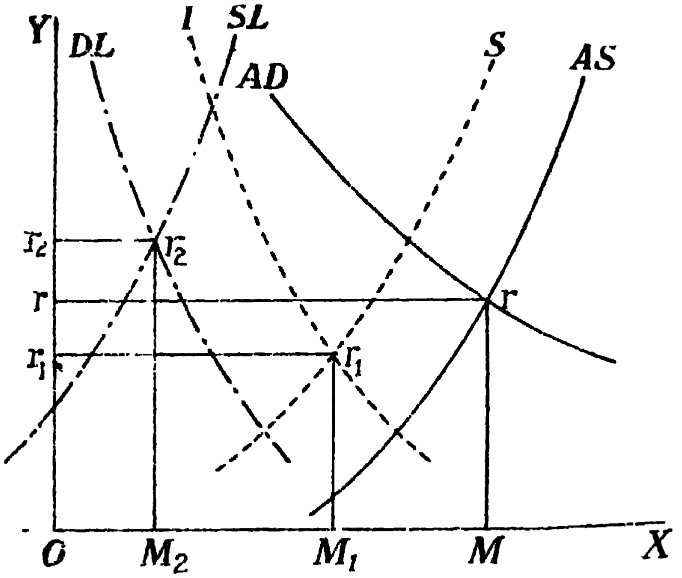

Diagram showing determination of Interest rate.
Fig. 61.

(2) There is another demand schedule for funds *DL* (dash-dot line) representing amounts demanded to be kept as liquid funds only (*i.e.*, for not spending at all), and there is the supply schedule for funds *SL* (dash-dot line) showing amounts supplied from cash balances. There will be a rate of interest at which the demand for liquid funds will be equal to the supply from liquid funds. This rate is r_2M_2 and is determined by the intersection of these two schedules *DL* and *SL*.

(3) The right schedules, both of demand and supply, represent the total of the above two schedules. That is, the aggregate demand schedule will represent the amounts demanded for investment (as in No. 1 schedule above) *plus* the amounts demanded for liquid balances (as in No. 2 above). In other words, it will be equal to $I+DL$. This is represented by the aggregate demand curve *AD* (firm line). Similarly, there is the aggregate supply curve *AS* (firm line) representing the total of supply of investable funds, *i.e.*, from savings (as in No. 1 above) *plus* from liquid balances (as in No. 2 above). The real rate of interest, *rM*, will be one at which the aggregate demand for investable funds is equal to the aggregate supply of investable funds as defined above and this is at the intersection of the aggregate de-

mand schedule AD and the aggregate supply schedule AS as is shown in the diagram. This rate r will be between the other two rates r_1 and r_2 as can be seen from the diagram, and this is not the rate which equals saving and investment. The discrepancy between these two is balanced by an equal amount of hoarding, or dishoarding, as the case may be. The disparity between saving and investment will cause changes in money incomes from one period to another. For example, if investment is greater than savings, money income will increase ; and if saving exceeds investment the money income in the next period is bound to fall. The movement of money income up and down will continue till saving and investment are equalised.

11. Marginal Productivity Theory. No adequate explanation of value in any of its aspects is possible unless we take into account the forces acting behind demand and supply. The Marginal Productivity Theory is the most satisfactory explanation of interest as it is of any other phenomenon of value. Marginal Productivity is the expression of the relationship between the degree of scarcity (or supply) on the one hand, and the alternative uses to which a commodity or a service can be put (or demand) on the other. When applied to interest, or the price of the services of capital, it takes into account the supply as well as the demand.

Analysis of Demand. On the side of demand, it may be noted that loans are wanted for two purposes: (*i*) consumption, and (*ii*) production. The demand on the part of borrowers for consumption purposes depends on their time preference. It will depend, in other words, on the relative importance they attach to their anticipated future wants. In case they regarded the satisfaction of present wants more important, they would be willing to borrow at a high rate of interest.

But the demand for funds for consumption purposes is insignificant as compared with the demand for productive purposes. The rate of interest that the producers or entrepreneurs will be willing to pay will depend on the *expected rate* of profit, and this in turn will depend on the value of the marginal product of capital. There are various alternative uses to which the available capital resources of the community can be put. A given supply of capital distributes itself, under conditions of perfect competition, in such a way as to equalise its marginal utility or productivity in the various uses. If the marginal productivity of capital is higher in one particular use, *i.e.*, if it earns higher returns there, capital is attracted to that use until the supply of the commodities produced by its help lowers their price, and hence the marginal productivity of capital in that use This process goes on until the return on capital in this case is the same as in any other case Marginal productivity of capital, it may be repeated, is the addition made to the total output by the extra unit of capital invested.

At any particular moment, as already said, the total supply of capital may be assumed as given. The supply is used by those who employ it in such a way as to make the marginal cost of capital and the marginal returns from its use equal. As far as any individual producer is concerned, the marginal cost is represented by the prevailing rate of interest. He pushes his investment of capital to a point where the marginal net revenue earned equals the prevailing rate of interest. If the rate of interest falls he employs more capital, and if it rises he uses less of it. No individual borrower will have to pay more than the prevailing market rate whatever his own rate of return may be. At the same time, in a competitive market no rate of return can exceed for long the market rate of interest.

A borrower does not settle the rate of interest as an individual. The market rate of interest is set by marginal borrowers and marginal lenders, and it must be such at which the aggregate demand for capital and supply thereof are in equilibrium. It is the aggregate demand, rather than individual demand, which counts. If the total demand for capital increases, the rate of interest rises, and *vice versa*. A greater demand for capital means higher marginal productivity of a given supply, and a smaller demand means lower marginal productivity. It is in this sense that marginal productivity determines the rate of interest.

It is to be remembered that from the demand side or the entrepreneur's point of view, it is not the *actual* but the *expected* rate of return which must, in the long run, approximate to the rate of interest. The *actual* return may be higher or lower than the *expected* return. If it is higher, competition will tend to drive it down, and if it is lower, the withdrawal of capital will tend to push it up, so that in the long run, the rate of return and the rate of interest tend to approximate to each other. This tendency may, however, be never realised.

Analysis of Supply. But what about supply ? So far we took supply as given. In the short period, we may assume supply to be given, since it takes some time for new supplies of capital to become available. What are the forces that determine the supply of capital ? In a word, the supply of loanable funds is determined by time and liquidity preference of the lenders in the aggregate. It will also determine what proportion of their funds they will invest in their own business. If, for instance, the market rate of interest is higher than their own time and liquidity preference, they will not borrow from the market but invest their own money in their business instead. They will, on the other hand, borrow from the market if the market rate of interest is lower than their time and liquidity preference.

In the long run, capital formation, as indicated in an earlier chapter, depends upon (*a*) Power to save and (*b*) Will to save. *The power to save* depends upon (*i*) total production, (*ii*) minimum necessary for maintaining the given standard of living, and (*iii*) developments in the banking system.

The *will to save* depends upon (*i*) state of security or law and order, (*ii*) banking facilities available in the country, (*iii*) expectations about rate of interest, and (*iv*) foresight as regards provision for future for oneself and family.

When the saving is done not by private individuals, but by public bodies and corporations, the amount saved, among other things, will depend upon their policy.

Supply of money also comes from bank credit.

The connection between the rate of interest and saving may be noted. Some people will save the same amount whether the rate of interest is high or low. They may be miserly people or very rich people. Others will not save whatever the rate of interest. They may be very poor people or spendthrifts. Still others will save more when the rate of interest is lower than when it is higher. Such are the people who want to get a certain fixed income at some future date. If the interest rate is higher, a smaller investment will give them their fixed income and if lower, a higher investment will be necessary. Finally, there are people who save more when interest rates are higher, and less when they are lower. On the whole, one may say that in a country higher rates of interest stimulate savings and lower rates act in the opposite direction. If the rate of interest remain high for a time long enough to let the forces of supply have full play, savings will be stimulated, the supply of capital will tend to increase, its marginal productivity will fall, and the rate of interest will come down.

We start from a position of equilibrium. Suppose a sudden increase occurs in savings and thus the supply of capital is increased. This will lower the rate of interest because the marginal productivity of capital will fall,*i.e.*, capital will be available for use in employments in which its marginal productivity is low. The rate of interest will stop falling when it has reached a point at which the demand stimulated by its fall is just equal to the supply. The opposite will happen if suddenly there is a decrease in the supply of capital. Capital having become relatively scarce will be used only for purposes in which its marginal productivity is higher. The rate of interest will go up, and demand and supply will reach a new equilibrium at the higher rate of interest.

The effect of an increase in demand is the same as that of a reduction in supply, and of decrease in demand the same as of an increase in supply.

The market rate of interest will be one at which demand for and supply of capital are in equilibrium, i.e., *at which the amount that the lenders in the aggregate are willing to lend is equal to the amount the borrowers are prepared to borrow.*

Interest and the Scarcity Principle. Speaking in terms of real resources, interest results from the relationship, between scarce resources, on the one hand, and the alternative uses to which they can be put on the other. Marginal productivity of capital in this real sense is derived from the marginal utility of the commodities for the production of which capital (with other factors) lends its services.

Given resources are face to face with competing demands. A price must be paid in order to withdraw these resources from the next best use. Ultimately the rate of interest merely reflects the degree of scarcity in which capital stands in relation to other factors of production when contributing to the consumers' competing demands for various assortment of goods and services.

12. How banks affect interest. It is an unrealistic statement to say that individual savers are the only source of loanable funds. It is well known that business men do not borrow from individual lenders. They borrow instead from banks. Banks have no time preference of their own. Since they do not lend in cash but merely create a deposit, they are tempted to lend more and more to increase their earnings. This creates an inflationary situation as a result of what is called involuntary or forced saving. Although banks have no time preference, they have liquidity preference all right. They must keep enough ready cash to meet their commitments arising out of their lending operations. This restrains them from overlending.

The central bank, which controls the whole banking system of the country, is in a position to set the rate of interest through its power to regulate bank credit. The banks can create new money by advancing loans or buying securities, and they can reduce the quantity of money by recalling loans or by selling securities. The Central Bank fixes the bank rate and makes it effective for the whole economy. So long as the banks have resources enough to buy or to sell securities they can maintain any rate of interest. In Bain's words, "The banking system, as regulated by the Central Bank, is in a position to set the rate of interest, and when it does so, the interest rate becomes a fixed price, and the quantity of money becomes a variable......which is adapted to varying conditions of demand for funds for investment and for liquid balances, and of supplies of savings."

13. Forced Saving and Voluntary Saving. We have seen above that supply of capital depends on saving. A distinction is sometimes made between voluntary saving and forced saving. By voluntary saving is meant saving out of the surplus of income over expenditure. This is the ordinary conception of saving. The people make this saving themselves. They try to increase their income and/or reduce their expenditure and thus make a saving. It is all voluntary and appears to be the most natural way of saving.

But a new conception has crept into the monetary jargon of Economics. It is that of *'Forced Saving'*. This saving is associated with inflation. Inflation is created not only by the currency authority injecting more and more notes into circulation but also by the banking system creating more credit. Banks create credit by advancing loans ; 'every bank loan creates a deposit'. The artificial increase in deposits places more funds at the disposal of the borrowers. This is extra purchasing power created in the community. Thus whether inflation is the outcome of the policy of the currency authority or the banking system, prices rise. The rise in prices imposes a 'forced saving' on the 'fixed incomists'. Forced saving does not mean that people save out of the increased money incomes that they get on account of inflation. That would be voluntary saving. Forced saving simply means that the people with fixed incomes are forced to curtail their consumption due to rise in prices.

Voluntary saving can go on indefinitely without producing any harmful result. Voluntary saving is most welcome, and every effort should be made to stimulate it. But forced saving which is associated with inflation, is something artificial, and injurious. Inflation is pregnant with dangerous possibilities. A nation resorting to unrestricted inflation is caught in a vicious circle, and it is not easy to get out of it. Excessive inflation may not only bring about the collapse of the economic system but may also threaten even the stability of the State. Forced saving has to be kept within safe limits, whereas voluntary saving can go on without any limit being put on it.

We may notice another difference between the two. In the case of forced saving, consumption is checked. Hence output of consumers' goods will contract. But business enterprise is greatly stimulated by rise in prices, and more factories are set up. Therefore the output of producers' (capital) goods is increased.

Finally, forced saving (*i e.*, inflation) brings about a general rise in prices. Prices of both consumers' goods and producers' goods rise. But, in the case of voluntary saving, demand for consumers' goods contracts and that for producers' goods increases. Hence the prices of the producers' goods will rise relatively to consumers' goods.

There are some people who believe that inflation (leading to forced saving) stimulates productive activity in the country and adds to its real wealth. As Dr. Hayek says, " 'Forced frugality' of fixed-incomists is thus compensated for in a certain degree by the amount of the addition made to the quality of sensible wealth—of wealth possessing a value in the way of use."[1] Benham also speaks in the same strain : "By raising money, as other money is raised ......government has in its power to accelerate, to an unexampled degree, the augmentation of the mass of real wealth."[2] Although under a planned economy, 'created' money can be used as a powerful instrument of economic development, yet unbridled inflation is bound to bring disaster in its train. The prosperity will be a disguised one and no real addition to the country's wealth will be made.

14. Short-term and Long-term Rates. In the light of the above, it is easy to understand why the rates of interest change. If there is a relative scarcity of capital, there will be a general rise in the rate of interest. Relative scarcity may be caused by increase in demand or decrease in supply.

In discussing changes in interest rates, we might distinguish between short-run effects and the long-run effects. Let us first study the variations in *short-term rates*. In the short period, scarcity will generally be caused from the side of demand. If business men expect trade revival or higher prices and profits, short-term rates of interest will rise due to greater demand for loans. The value of industrial shares will rise, while the price of fixed-interest bonds or securities will fall, thus increasing their yield. The same results will follow if new inventions open up new avenues of profitable employment of capital.

Short-term rates may also be raised by influences working on the side of supply. Bad harvests, for instance, may create scarcity of capital; an increase in income tax may reduce people's capacity to save; and a shortening of the working day by reducing production may have the same effect.

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[1] Quoted by Brij Narain in *Principles*, 1945, p. 336.
[2] *Ibid.*

Similar influences lower the rates of interest in the short period. Expectations of a trade depression will discourage new investment, the demand for fixed interest-bearing securities will increase, their value will go up and the yield will fall, and interest rates will fall. As regards supply, new inventions may economise capital. A "bumper" harvest may also have the effect of increasing supply of capital and lowering short-period rates. Similarly, a general increase in wages may reduce the share of capital (or rate of interest) in the national dividend.

Short-period rates are also influenced by political factors. A general sense of political insecurity will discourage enterprise and reduce demand for funds; hence the rate of interest will be lowered. An international crisis in this way will cause rates of interest to fall sharply. But rates of interest may be raised if such a crisis reduces the capital offered in the loan market.

Generally, the short-term rates are very low. This is due to the fact that there are certain funds with the banks (*e.g.*, current accounts) in which they dare not lend on a long-term basis and on which they would like to earn whatever they can. At a time of financial panic, however, even the short-term rates go up. The banks are reluctant to lend, whereas the business men are keen to borrow to honour their commitments, and to tide over the period of stress and strain. Since they need money only for a short period, they do not mind paying a high rate. In fact it can be shown that a high rate for a short period entails less cost than a low rate for a long period, when the need is only a temporary one.

So much about the short-period rates. What about the *long-term rates*? Changes in short-period rates cause corresponding changes in the long-period rates, due to movement of funds from short-period to the long-period markets, and *vice versa*. Long-period rates, however, are largely affected by long period factors or influences such as changes in the size of the population, changes in the habits of saving of the people, etc. Other things being equal, an increase in population tends to raise interest rates and a decrease to lower them in the long run. A higher expectation of life stimulates savings and thus tends to lower interest rates, and *vice versa*. Uncertainty about the future discourages savings and tends to raise interest rates.

Generally speaking, the long-term loans yield a higher rate of interest than short-term loans. The risk of depreciation of the value of long-term securities is much greater than that of the short-term securities or bills. Part of the long-term interest, is therefore compensation for the additional risk. The longer the period, greater the risk of either non-payment or of depreciation in capital value.

It is, however, possible for the long-term rates to be lower than the short-term rates in some cases. If the investing public has a high degree of confidence in the stability of future conditions, they may be willing to lend at lower rates for longer periods. The bonds (long-term) carry lower rates than, for instance, what are charged on overdrafts (short-term loans). But the bonds have ready realisability. Hence in the case of bonds money is not irrevocably locked up for long periods. On the other hand, short-term bank loans are generally renewed. Over-draft arrangements become permanent. Hence the short-term loan in such cases is not really short-term just as the bond may not be really a long-term investment. Longer loans also save the botheration of reinvestment of surplus funds. Such conditions, however, are not very common in a world full of uncertainties as ours is.

Short-term rates fluctuate more violently than long-term rates. The reason is that changes in rates usually first occur in the short-loan market, and the long-term (real, not nomimal) rates tend to move in sympathy with the short-term rates. If the short-term rates, for instance, rise sharply, investors will tend to sell their long-term securities and invest in bills and other short-term paper. The pressure of sales will lower the value of securities and correspondingly raise their yield. Thus long-term interest rates will be raised. The converse will happen if short-term rates fall. People will tend to move their funds from the short-term to the long-term markets and the greater demand for the long-term securities will raise their capital value. The yield of such securities will be lowered, and the long-term rate of interest will fall.

15. Economic Progress and the Rate of Interest. Economic progress connotes technical progress, increase in the volume and range of production, rise in the standard of living, etc. With economic progress and a higher level of money incomes, demand for goods is bound to increase and so also the demand for capital. Thus it would seem that the rate of interest must rise as we advance economically.

But this is not so. With economic progress both our power to save and the will to save are considerably increased. The surplus of production over consumption is increased ; the development of banking and insurance companies provides safe and remunerative channels of investment ; and the security of life and property, and increase in foresight due to educational advance augment the various motives for saving. The cumulative effect of these is that the supply of capital is increased much more than the demand for it. Hence the rates of interest will tend continuously to fall. In advanced countries like England and America, the rate of interest has fallen to as low as ¼% or ⅛% on certain types of loans.

As a country advances, the habit of hoarding is discouraged and the desire to invest is increased. As the supply of capital made available for investment increases, its marginal productivity, and hence the rate of interest, falls.

Can the Rate of Interest fall to zero ? Theoretically, a zero rate of interest can be conceived. As time goes on, people's power to save and will to save tend to increase. The former because of the rising productive capacity and the latter because of the greater foresight and the tendency to discount the future at a low rate among the more advanced people. A stage can be imagined in which capital accumulation may outstrip the demand for capital, thus lowering the marginal productivity of capital to zero even making it negative, that is, people may even pay something for the care of their savings.

It is, however, extremely improbable, if not actually impossible, that such a stage will be reached.. In the first place, the demand for capital will increase with the increase in population and the increase in the variety of people's wants. Moreover, with technical progress it is likely that the demand for capital will increase, since more and more roundabout methods of production will be employed. It is true of course that new inventions may substitute methods which economise capital; this may lead to a fall in the rate of interest. But the marginal productivity of capital will still be positive and hence there will always be a positive rate of interest. Moreover the difference between the present gratification and future gratification cannot altogether be removed. The rate of interest is a measure of this difference.

Looking from the side of supply also, we come to the same conclusion. Some people may save even if the rate of interest is zero or negative. But the volume of savings would be seriously reduced if there were no competition for postponing consumption, thus creating relative scarcity of capital.

There is thus no possibility of the rate of interest falling to zero. We can enforce a zero rate of interest only if capital loses its character of scarcity. As it is, capital is scarce relatively to demand for its services. There are so many alternative uses to which capital can be put. It is the rate of interest which determines to what uses it may be put.

16. Interest in a Socialist State. Even in a socialist society interest cannot be abolished, though it may not be paid to private individuals. Even there, through its instrumentality, priorities regarding the use of scarce capital resources for various possible employments will be determined. The order of priorities in a socialist State will probably be different from the one in a capitalist society, but interest will perform its function all the same. It has the same function as the function of price, *viz.*, it adjusts demand to the supply available. It enables capital to be apportioned between competing demands of alternative uses. It is through the rate of interest that those uses which promise the highest future returns receive the first consideration. Of course the criterion of the highest future returns will differ in a capitalist society from that in a socialist society. In the former, expectations of profits for private entrepreneurs and in the latter the conception of welfare of the planning authority, will determine the priorities in investment. You cannot abolish interest, you can socialise it if you socialise capital. As long as capital is not socialised, interest must be paid to keep up the stream of capital formation. Interest, therefore, must be paid, because the borrower can pay it, and the lender must be paid if his capital is wanted.

17. Interest and Rent. Some differences between interest and rent may be noted.

(*i*) With the advance in civilization and economic progress, the rate of interest tends to fall, whereas rent tends to rise. It is due to the fact that the supply of capital is continuously increasing. But the quantity of land is limited and cannot be increased, whereas the demand for it goes on increasing as population increases.

(*ii*) On account of the great variations in fertility and situation, the rents of lands vary widely. These differences in qualities of land are permanent. The greater the competition, the more marked will be the differences in rents. On account of the immobility of land, it cannot be easily diverted from one use to another. Hence inequalities of rent tend to be perpetuated.

Interest, on the other hand, tends to equality, only the rates of gross interest differ due to factors like risk and inconvenience. Capital is much more mobile, and differences in pure interest, if any, tend to disappear on account of competition.

(*iii*) There is no-rent land, but there cannot be no-interest capital. Capital is man-made and has a definite supply price. Every portion of capital must bear interest. But there may be some lands which are too poor to yield any rent or surplus. Land is nature's gift and cannot be withdrawn even if it earns no rent.

18. Interest, Rent and Quasi-rent. There are economists who deny that there is any real difference between rent, quasi-rent and interest. Their contention is that there is nothing peculiar about land or, at any rate, its peculiarities are exaggerated. There are other things, besides land, which are limited. Also, the differential element is present in other factors of production too. It is thus argued that incomes from investments, whether in permanent things like land or in semi-permanent things, or in perishable articles, are absolutely alike from the point of view of the working of economic principles. The principle of scarcity is the basic principle which is applicable to all cases of determination of value.

But these similarities should not blind us to some fundamental differences between interest, rent and quasi-rent. The chief difference lies in the reaction on the supply of the factor of changes in its remuneration. Rent may rise or fall but the supply of land remains unaffected ; and in the case of quasi-rent too, the supply remains unchanged for some time but a change in the earnings of quickly reproducible factors (*e.g.*, capital) tends to produce fairly quick changes in the supply thereof. The fact is that scarcity of land is its permanent feature, whereas the scarcity in other things is only temporary and exceptional.

It is the elasticity of supply of a factor and the time needed for adjustment that differentiate between rent, quasi-rent and interest. In case the supply of a factor is inelastic, as in the case of land, both in the short period and long period, the income from it is in the nature of rent ; if the supply is inelastic in the short period but elastic in the long run (as machines or houses during war), the income is called quasi-rent. But if the supply of a factor is elastic both in the long and short periods, the income therefrom is called interest.

But economists like Marshall think that there are differences of degree and not of kind. He says : "Interest on free capital and quasi-rent on an old investment of capital shade into one another gradually ; even the rent of land being not a thing by itself but a leading species of a large genus.''[1] But even this distinction of degree is vital from the point of view of practical policy and taxation. They raise distinct social and financial problems.

19. Effect of Changes in the Value of Money on Interest. Value of money means the purchasing power of money, which, in turn, depends on the price level. If prices rise, money buys less which means the value of money falls. Conversely, when prices fall, the value of money rises.

Now let us see how changes in the value of money (*i.e.*, changes in prices) affect the rate of interest.

When prices are high, business men make large profits, the demand for capital increases and the rate of interest rises. Also, as creditors lose when prices rise, they will try to compensate themselves by raising the interest rates. Further, with a continuous rise in prices, command over goods in the present is attached greater importance than that in the future. Thus, in terms of the Austrian theory, the rate of interest will rise. When, with the rise in the prices, the value of money falls, greater inducement is needed to induce the capitalists to save. Unless that inducement is forthcoming, that is, unless the interest rates rise, the supply of capital must shrink. Demand remaining the same, the rate of interest must rise.

On the other hand, when the prices fall, generally speaking, the rates of interest tend to fall too. The purchasing power of money having risen, the creditors will be contented with a lower rate of interest. Nor can the debtors afford to pay more, because when prices fall, the burden of indebtedness increases. Also, with the falling prices business enterprise is discouraged, the demand for capital contracts, and the rate of interest falls.

Hence we may conclude that the rate of interest varies inversely with the changes in the value of money and directly with changes in the price level.

20. Consequences of Changes in Interest Rates. Rise and fall in the rates of interest produce several repercussions. Briefly, some of the consequences of the rise in the rate of interest are : (1) A rise in the rate of interest makes the holding of stock of goods costly. Speculators and middlemen are discouraged ; the demand for raw materials and semi-finished goods contracts : consequently their prices fall. (2) Cost of constructions also goes up when interest rates rise. If the house rents do not also go up, building activity will be discouraged. Unless the rates of profit go up, the demand for factories will also go down. (3) When rate of interest rises the capitalists will borrow less unless bigger profits are going to be made. This will check industrial and commercial enterprise. (4) Rise in the rate of interest will stimulate saving and, in course of time, increase the supply of capital. (5) Prices of bonds will go down, because a smaller sum invested at a higher rate will yield the fixed interest of the bond.

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[1] *Principles*, p. 421.

Fall in interest rates have the opposite effects : (1) The prices of fixed interest-bearing bonds will go up. (2) Savings will be discouraged. (3) Speculation will be stimulated and demand for raw materials and semi-finished goods will go up as the cost of holding stocks is now less. (4) Commercial and industrial enterprise will be stimulated. But it is well to remember that a mere fall in interest rates will not do it. There must be good prospects of making profits. Otherwise low rates of interest will not tempt business men to borrow. You may take a horse to water, but you cannot make him drink. (5) Building activity will be encouraged. (6) If interest has fallen because of increased voluntary saving, demand for consumers' goods will contract and that for producers' goods will increase. Factors of production will move into producers' goods industries. (7) If the low rate of interest is due to the increased supply of capital, the larger use of capital in conjunction with other factors of production will raise their marginal productivity. Hence rents and wages will rise. (8) Increase in manufacturing activity will cheapen goods and benefit consumers as a whole.

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CHAPTER XXIX

PROFITS

1. Nature of Profits. Profit is the reward of the entrepreneur, rather of the entrepreneurial functions. In the words of Drucker, "The surplus of current income over past costs is profit. It is measured by comparing the present income with the past average ; it is a projection of the present on the past." This, however, is profit from the point of view of a trading economy. The industrial economy is different ; it is corporate rather than individualistic. Production is a prolonged process, whereas trading is immediate. Hence industrial economy focuses its attention on future rather than on the past. From the point of view of an industrial economy, profit is represented by the difference between current cost and current production and it is a sort of a premium for the future costs of staying in business and these future costs are the various types of risks involved in the enterprise.

The analysis of profits presents a special difficulty. "It is difficult to frame a simple theory of profits which would include the small independent trader, the large employer, the small holder and the shareholders of a joint stock company, while excluding responsible managers."[1]

Profit differs from the return on other factors in three important respects : (*a*) Profit is a residual income and not contractual or certain income as in the case of other factors. (*b*) There are much greater fluctuations in profits than in the rewards of the other factors. (*c*) Profits may be negative, whereas rent, wages and interest must always be positive.

2. Analysis of Gross Profits. The best way to understand the true nature of profits is to analyse the gross income of the entrepreneur into its various component parts. Gross profits stands for the total earnings of the entrepreneur, not necessarily for the entrepreneurial functions only. It is a mixture composed of several elements. Prof. Walker was the first economist to draw the distinction between interest and profit in this mixture. According to him, the entrepreneur's income consists of two elements only, *viz.*, interest and profit.

There have been further refinements in modern times, of the several items of which pure profit, however, is the return on the entrepreneurial functions *only*. From the total receipts of the business must be taken out what has to be paid out to the various factors of production engaged on contract basis. Thus the rent of land, the wages of labour, and interest on capital, have to be deducted. What remains is the gross income or gross profit. This again can be analysed as :—

(*i*) *The interest on the entrepreneur's own capital* invested in the business is often confused with profits. This is not profit because the entrepreneur could earn this interest by lending his capital. We must, therefore, make a deduction for interest on the entrepreneur's own capital, at the current rate of interest, out of the gross profit in order to ascertain net profit.

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[1] Briggs and Jordan, *op. cit.*, p. 466.

(*ii*) *Rent of land owned by the entrepreneur* also should not be counted as profits. He could earn this rent by giving his land to a tenant ; a deduction must be made at the current rate of the rent of land similarly situated and possessing similar other advantages.

(*iii*) *The entrepreneur's wages of management or superintendence.* This is the return for the work done by the entrepreneur as manager, and could have been done by him on salary basis for another firm. He must be allowed a salary, which should be considered his wages rather than profit.

The above three elements, strictly speaking, are not the reward of the entrepreneur as such but as capitalist, landlord and manager. These he could earn without setting himself up as an entrepreneur.

(*iv*) *The reward of the entrepreneur as risk-taker.* The function as a risk-taker must be performed by the entrepreneur himself. Certain risks, however, are insurable, *e.g.*, risks of accident, fire and marine, etc. But as we shall see, many risks cannot be insured, and these must fall on the entrepreneur.

(*v*) Gains accruing to the entrepreneur for the *special ability as a superior bargainer* with labourers, capitalists, landlords, suppliers of raw materials and consumers—all those with whom he has dealings.

(*vi*) Then there are *monopoly gains* (*see* Sec. 6). These are due to imperfect competition which enables the entrepreneur to charge higher prices or to pay lower rewards to the factors hired by him and thus increase his profits.

(*vii*) *Conjunctural gains* are another element. They are also called "windfall profits". These are due to favourable circumstances or pure luck, as outbreak of a war giving high profits to producers of essentials of war and even to other producers. During the war, many entrepreneurs made enormous profits due to war demands and high prices in India and elsewhere. Sudden rise in prices is not the only source of windfall profits. They may also arise on account of sudden increase in demand due to non-monetary causes like change of taste or discovery of new uses of a product. Windfall profits will also emerge from a shift in population.

The tendency among modern economists is to accept the American view of profits as being the reward of purely entrepreneurial functions, which cannot be performed by paid employees. *The income from risk-taking and gain from bargaining are regarded by some economists as "pure profits"* of the entrepreneur as against the " gross profits " which include all the items enumerated above. Pure or Net profit is " the amount that accrues to the entrepreneur for assuming the risk inseparable from all business under the system of production in anticipation of demand." " It (pure profit) is a payment made exclusively for bearing risk. The essential function of the entrepreneur is considered to be something which only he can perform. This something cannot be the task of management, for managers can be hired, nor can it be any other function which the entrepreneur can delegate. Hence it is contended that the entrepreneur receives a profit as a reward for assuming *final responsibility*, a responsibility that cannot be shifted on to the shoulders of any one else.''[1]

Let us examine some of the well-known theories of profits.[2]

3. **Profits, a Reward for Risk-bearing.** Most people do mind the risk which makes them hesitate to take a plunge in business. The greater the risk the higher must be the expected gain in order to induce them to start the business. All businesses are more or less speculative, and unless the risk-taker is going to be amply rewarded, business will not be started. As risk acts as a great deterrent, the supply of entrepreneurs is kept down, and those who do take the risk earn much more than the normal return on capital. Hence profits are regarded as a reward for risk-taking or risk-bearing.

This theory of profits is associated with F. B. Hawley's name.[3] He says profit is the reward of risks and responsibilities that the undertaker....subjects himself to. Drucker mentions four kinds of risks : replacement, risk proper, uncertainty and obsolescence. Replacement, generally known as depreciation, is calculable and is counted as cost. Obsolescence is the least calculable but is also an item in the costs. Risk proper (*i.e.*, risk of marketability of the product) and uncertainty are not costs in the conventional sense, but are charges against profits. They may be called costs of staying in business. Physical risks like fire, accident, etc., can be provided against by insurance, and are, therefore, included in costs. There are, however, risks that cannot be foreseen, and hence cannot be provided against. It is for undertaking these risks that the entrepreneur is rewarded.

As against this, there is the view that though profits do contain some remuneration for risk-taking, yet the high profits made by the entrepreneur cannot in their entirety be attributed to the element of risk. They are not, at any rate, in proportion to the risks under taken. On the contrary, it is pointed out by Carver that profits arise not because risks are borne, but because the superior entrepreneurs are able to reduce them.[4] We might say—though it may seem paradoxical—that profits are made not because risks are borne but because they are avoided. Still it cannot be denied that a great deal of pure profit is the reward for risk-bearing.

4. **Dynamic Theory of Profits.** This theory is associated with the name of the American economist, J. B. Clark. He says that in a static world, where the size of the population, the amount of capital, the quantity and quality of human wants, the methods of production, technical knowledge, the organisation of business, etc., remain the same, profits tend to disappear under the force of competition. Profits represent the difference between selling price and cost. It is a surplus above costs. But if competition works in a frictionless manner,

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[1] S.E. Thomas—*Elements of Economics*, 1939, pp. 293-94.

[2] For the history of the theories of profit, *see* F. H. Knight, *Risk, Uncertainty and Profit*, 1940, Ch. II.

[3] *Enterprise and the Productive Process*, 1907.

[4] *Distribution of Wealth*, p. 273.

the surplus will vanish. Wherever there is a surplus, production will increase, bringing down the price. That is how the surplus will disappear. " In the static state each factor secures what it produces, and since cost and selling price are always equal, there can be no profits beyond wages for the routine work of supervision."[1] In a stationary state everything is known and knowable. There is no risk and no uncertainty, and hence no profits.

But we are not living in a stationary state. Ours is a dynamic world and some changes are constantly taking place. The clever entrepreneur foresees these changes. He is a pioneer. Somehow by invention or otherwise, he lowers the cost and makes profits. The changing world offers limitless opportunities to the far-sighted, daring and clever entrepreneurs to make profits by turning the facts of the situation in their favour. It is only because the world is dynamic that it is possible for them to keep the lead and reap the profits. In a static state, profits will disappear, and the entrepreneurs will only earn wages of management.

Prof. Knight, however, is of the opinion that only those changes which cannot be foreseen and which cannot be provided for in advance will yield profits and not others. He says, "It cannot, then, be change, which is the cause of profit, since *if the law of change is known,* as in fact is largely the case, no profits can arise. Change *may* cause a situation out of which profit will be made, *if* it brings about ignorance of the future."[2] Thus it is ignorance of the future or uncertainty, and not necessarily change, which, according to Knight, is the cause of profit.

5. Profits, a Reward for Uncertainty-bearing. According to Prof. Knight, it is *uncertainty-bearing rather than risk-taking* which is the special function of the entrepreneur and leads to profit. We have seen that there are certain risks which are foreseen and provided against. Risks of death and of accident like fire and ship sinkings are statistically determinable. Their incidence is measurable. The insurance companies undertake these risks in return for premia paid to them. The payments of these premia are included in the cost of production. The entrepreneur gets no profit on account of these risks. Hence risk-taking is not the function of the entrepreneur but of the insurance companies.

But the genuine economic risks, risks of the marketability of the product due to shifts in demand, are unforeseen and unpredictable. Knight will not call them risks but uncertainty. The term risk is applied to those dangers which can be known and foreseen. The entrepreneur gets a remuneration for bearing uncertainties (unforeseeable risks) and nothing for the risks which have been foreseen, the incidence of which is on the insurance companies.

Just as waiting (capital) is a factor of production, uncertainty-bearing has also been given the status of a factor of production.

Like other factors of production, uncertainty-bearing has a supply price, *i.e.*, unless a certain return is expected, no entrepreneur will be induced to face the uncertainty. The supply of this factor, uncertainty-bearing, depends on the temperament of the entrepreneur, the total resources at his command and the proportion of these resources he is inclined to expose to uncertainty. A rich entrepreneur of a bold and venturesome spirit, who has made up his mind to invest a big proportion of his wealth, can bear greater uncertainty. A greater gain is necessary to induce an entrepreneur to expose a larger proportion of his capital than when only a small proportion is exposed.

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[1] Knight, F.H.—*Risk, Uncertainty and Profit.* 1940, p. 33.

[2] *Ibid.*, p. 3.

It must be borne in mind that it is the combination of uncertainty-bearing and capital which brings a reward to the entrepreneur in the form of handsome profits. Capital alone by itself is inert and lifeless, and uncertainty-bearing without capital has no meaning. It is only capital which can be exposed to risk. And this combination is a rare one. An entrepreneur of a speculative turn of mind may have little capital at his command. On the other hand, there may be an extraordinarily rich man but he may be timid.

The theory of uncertainty-bearing, as a cause of profit, has been criticized on the following grounds :—

(1) Uncertainty is not the only factor that limits the supply of entrepreneurs. Lack of funds, lack of knowledge, lack of opportunities and the presence of economic friction are some of the factors that restrict the supply of entrepreneurs.

(2) Uncertainty-bearing is not the sole function of the entrepreneur. The profit that he gets is also the reward for other services that he renders, *e.g.*, initiating, co-ordinating, bargaining, etc.

(3) Uncertainty-bearing cannot be elevated to the status of a factor of production. It is an element of real costs which means exertion, abstinence, sacrifice, etc., as distinguished from money cost. Cost is not generally measured in terms of real cost. We know that capital is a factor of production but not abstinence that is needed to save capital.

6. Monopoly and Profit. So far we assumed that the employer is working under conditions of competition. Under perfect competition, there are no profits in the long run. Profits must, therefore, be either temporary or monopoly profits. The monopolist is able to control output so that the price is not allowed to fall to the level of cost as is the case under competition. By restricting entry of new firms into business by means of agreements and through the use of patents, rights and similar devices, monopolists are able to reap monopoly profits. But the most common source of monopoly profits lies in monopolistic competition or product differentiation.

An element of monopoly profits can also be traced in what have been called *innovation profits* or pioneering profits. A firm which produces a new product, or is able to discover a new material or a cheap process or a new market, will always be able to make extra gains till its rivals make an inroad into its business. Since competition is absent, partially or totally, gains arising out of innovation or pioneering may be termed as monopoly gains.

In the actual world, the typical cases are of imperfect competition since absolute monopoly is rare. And, therefore, the element of monopoly gain is not as rare as one would think. In fact such an element will be found almost in all profits.

7. Profits and Wages. The connection between profits and wages can be looked at from two points of view. One view, that of the socialists, is that profits are simply *deductions from the produce of the workers' labour*. According to this view, profits are not justified because they are earned at the expense of the wage-earners. The second view is represented by Prof. Taussig. He regards profits as simply a particular kind of wages.

As for the socialist view, it may be pointed out that under perfect competition rates of wages for the same type of labour tend to equality in the same industry. The same wages are paid by the employer who earns no profits as by the one who earns high profits. The superior employer earns profits, not because he pays lower wage (this he cannot do under competition) but because, on account of his superior organising ability and uncertainty-bearing powers, he can produce at a cost lower than that of his inferior rival.

Now consider Taussig's view that profits are merely wages for a special kind of labour. " Profits," says Taussig, "are best regarded as simply a form of wages. " This position of Taussig cannot be accepted. There are fundamental differences between wages and profits.

(*i*) Profits are essentially a reward for assuming risks of business. But the labourer takes no risk. His reward or wage is primarily for the labour perfomed by him. His risk is insignificant as compared with the risk taken by the employer. (*ii*) There is much greater element of chance gains in profits than in wages. Wages thus are " earned incomes " in a much more real sense than profits. (*iii*) Part of profits, and in some cases a major part, is due to imperfections of competition. Under imperfect competition, while profits tend to swell, wages tend to be depressed, for reasons already noted.

8. Is Profit a Kind of Rent ? Another view of profits makes them analogous to rent. The Rent Theory of Profit, as it may be called, was propounded by the American economist, F. A. Walker. He was the first to introduce a distinction between a capitalist and an employer into English economic theory. An entrepreneur need not be a capitalist. He is a person who may undertake a business without using any of his own capital.

Walker regards profit as rent of ability. Just as there are different grades of land, there are different grades of entrepreneurs. The least efficient entrepreneur, who must remain in the field of production to meet the current demand, just recovers his cost of production. Above him are entrepreneurs of superior ability. Just as rent arises because of the differential advantage enjoyed by superior land over the marginal land, profit also is the reward for differential ability of the entrepreneur over the marginal entrepreneur or the no-profit entrepreneur. *Profits are thus like rent and, like rent, they do not enter into price.* Wages of management are not profit. The marginal employer only earns the wages of management and no more. With a slight unfavourable turn of prices or costs, he would prefer to work as an employee rather than as an employer. Wages of management thus must be paid to keep up the given supply of entrepeneurs. Such wages thus enter into price.

This theory has the same weakness as Ricardo's theory of rent. The employer, who will leave the business with a slight unfavourable turn of events, is not necessarily the least efficient. He may be higher up in the scale and may be attracted by more profitable alternative employments.

The theory, moreover, does not explain the real nature of profits ; it merely provides at best a measure of profits.

It is wrong to say, again, that profits do not enter into price. They may not enter in the short period, but they must in the long period. The entrepreneur performs the essential function of risk-bearing, and unless the price of the commodity is high enough to compensate the employer for this, the supply of employers will decrease until the price rises high enough to pay for the risk-bearing service.

Some employers may earn high profits and others may suffer heavy losses. When the average is taken over a long period the so-called surplus tends to disappear.

Finally, the theory even fails to explain the size of the profit. The differential gain is due to scarcity of superior employers but why does this scarcity arise ? In the case of land, scarcity is due to natural limitations. In the case of entrepreneurs there are not such limitations. The theory of profit must explain the cause of such scarcity.

Thus, there is no doubt a differential element in profits as in rent, superior entrepreneurs earning higher profits. But the analogy ends here. There may exist no-rent land but there cannot exist no-profit entrepreneur. Rent may not enter into price but normal profits do. This is due to the fact that the supply of land is there, rent or no rent. But the supply of entrepreneurs cannot be maintained unless profits are paid. Expected profits or prospective profits do enter into price, though the realised profits may not. But even realised profits enter indirectly into price in the long run by influencing expectations of profits.

9. **Normal Profits.** Some writers introduce the concept of normal profits. Surpluses that arise on account of uncertainty and imperfect competition are the phenomena of dynamic or changing conditions. As Prof. Knight points out, normal profits belong to the equilibrium state, or to the state in which changes are taking place which can be anticipated and calculated. Of course it is difficult to imagine a world entirely devoid of change. But we can have societies, specially old established societies, in which conditions are relatively static and business methods have become more or less of a routine nature.

In a state of equilibrium or in a static society, resources are more or less fixed and have attained such a distribution among various industries that there is no motive for transferring them from one employment to another. There is no tendency for any firm to enter or leave the industry. Uncertainty, therefore, would be at a minimum and competition perfect. Under such conditions, pure profits will tend to disappear and the entrepreneurs will earn only wages of superintendence. Normal profits, therefore, practically amount to earnings of management. They are just sufficient to induce an entrepreneur to stay in the industry.

In a progressive state also similar results can follow, provided competition is unrestricted and changes can be anticipated. But since changes are not uniform, entrepreneurs in some industries may be able to make higher profits than in others.

Surplus profits can arise in a dynamic world even though the factor of uncertainty is absent, provided the period is short. But this will only be a temporary condition. Industries yielding profits higher than the normal will attract entrepreneurial ability and other factors of production. The rate of profits in such industries will tend to fall. In industries, which are being depleted of such factors, profits will rise until the normal level of profits is established. But normal profits in a dynamic world need not necessarily be equal to the wages of a hired manager even though the factor of uncertainty is absent. The very fact that change exists, even though it can be anticipated, means heavier responsibility on the entrepreneur than in a purely static state. To keep up the supply of entrepreneurs, therefore, inducement must be given to them to take up such responsibility. But this additional payment over and above the wages of management will be kept within narrow limits by the forces of competition.

In a dynamic world, with element of uncertainty in existence, even under competition, profits can be kept permanently above the normal level. Abnormal profits also can permanently arise where the supply is in the hands of a monopolist and demand is inelastic. This will be so whether uncertainty exists or not.

It should be noted, that uncertainty in its turn is not something constant. There are degrees of uncertainty. The greater the degree of uncertainty, the higher must be the profits to compensate the entrepreneurs for bearing its risks.

10. Do Profits Tend to Equality ? Here again we cannot give a straight answer. It will depend upon the conditions that prevail. In a state of equilibrium, profit in the sense of wages of superintendence will be equalised. Pure profit will disappear. In a state of society, in which change is present but the factor of uncertainty is absent, profits will tend to equality about the normal level as already explained. Differences, however, will not be entirely absent because of the differences of ability. But these differences will be kept narrow by the force of competition. On the whole, one may say that the greater the routine character of an industry, the greater the tendency of profits to equality, provided the period is fairly long and competition unrestricted. In the short period, however, inequalities can exist.

But when we are dealing with a changing society in which the factor of uncertainty is prominent, there is no tendency towards equality of profits even in the long run. Here profits may show considerable variations.

11. Profit and Marginal Productivity. Can we apply the marginal productivity theory to profits ? In a general way, yes.

Marginal productivity, as we have explained so frequently, is the expression of relationship between scarcity and demand. The supply of entrepreneurs is short and it is not easy to increase it. The demand for entrepreneurs, especially entrepreneurs of exceptional ability, on the other hand, is great in the modern conditions of production. The marginal productivity of entrepreneurs is high ; therefore, profits are high. The greater the factor of uncertainty and the greater the scarcity of employers of ability high enough to make a success of business, the higher the profits.

The only difference in the application of the theory of marginal productivity to entrepreneurs as compared with other factors is that here the forces of competition work directly, while in the case of other factors they work through the employer. The ultimate substance is the same. It is the community's competing demands that have to be satisfied, and thus entrepreneurial ability has alternative uses. Forces of competition tend to equalise the profits of employers of equal ability.

The theory, however, cannot be applied in such a clear-cut way to profits as it applies to other phenomena of value. This is due to the fact that the employer performs a complex set of functions and the element of uncertainty refuses to be standardised. Moreover, employers cannot be increased or decreased in minute doses since they constitute a large unit. Withdrawal of one unit may disorganise the whole business. It is thus difficult to measure the marginal net product of the services of this factor of production.

Conclusion regarding the Determination of Profits. In conclusion we may say that no one theory is adequate to explain the determination of profits. Different views emphasize different aspects of the functions of the entrepreneur. The real difficulty arises from the fact that profit is not a homogeneous income. It is a composite income, due to the composite character of the functions of the entrepreneur who takes risks, bears uncertainty, plans, initiates, takes decisions, etc. No one theory can fully explain the true nature of profits. Mere analysis of profits into its component parts according to the various functions, for which they are a payment, also cannot explain the emergence of profits. The true theory must explain why organising ability is so scarce, because it is this scarcity in the face of demand for exceptional entrepreneurial ability that leads to the emergence of the surplus, called pure profits, in the modern world of uncertainty and change. The theory must explain exceptional profits due to conjunctural gains and the element of monopoly. It must also take notice of the influence of the present stratification of society which restricts mobility and opportunity. Due to these complexities no comprehensive theory of profits has yet been expounded.

12. The Function of Profit.[1] It is commonly thought that the profit is for the entrepreneur ; it is his concern, and it is at the expense of the consumer or the general public. It is supposed that there is an inherent conflict between the interests of the individual entrepreneur and social welfare or between private net product and social net product, as Pigou would put it.

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[1] *See* P. F. Drucker on " The Function of Profit " in *Fortune*, March, 1949.

But this view is a mere delusion. Far from there being a conflict, there is an underlying harmony between what the entrepreneur gets and the society gives. The conflict is more apparent than real. Whatever the form of society—capitalist, socialist, communist or fascist—profit performs a very essential and useful function.

Whatever philanthropically inclined entrepreneurs may say about their duty to promote the welfare of the society and of those who are associated with them as workers in the enterprise and their duty not to make profits but to make the people happy, the foremost duty of an economic enterprise is economic performance, which means the preservation of the resources entrusted to it. " The preservation of these resources is the corporate enterprise's first obligation to itself and to society. If it fails in this, it not only weakens its own power to survive, but impoverishes the whole society.'' In order to keep its resources intact, the enterprise must avoid losses and work for the maintenance of a normal rate of profit.

In its battle for survival, it is the duty of each individual enterprise to try to cover (1) current costs of business ; and (2) the future costs of staying in business arising out of four kinds of risks already mentioned (*viz.*, replacement, obsolescence, risk proper and uncertainty). But, in addition to these, there are two more functions which a profit-making industrial enterprise must perform : (3) One is to fill what Drucker calls " dry holes ", *i.e.*, a successful enterprise must, from the social point of view, cover the losses of the unsuccessful ones. " Just as a productive oil well must pay for the pipe and labour that went into a dry hole, so the surviving company must pay for the economic loss of its competitor's failure.'' This is the insurance principle. Any individual enterprise may try to avoid these dry holes, but the society as a whole cannot. (4) There is still another function which profit must discharge, *viz.*, to bear the social burden. The successful industrial ventures must bear the cost of social services or social security measures like education, health services, poor relief, old-age pensions, maternity relief, defence, civil administration, etc.''

These four functions profit has to perform for the sheer maintenance and preservation of modern industrial economy. But no modern community could be satisfied with mere maintenance or survival. It must provide for a progressive growth and development. The economy must expand and increase productivity not only by the exploitation of *virgin resources* but also by making a fuller and better use of *existing resources* through technological advances, so that they are made more productive than what they have been. All this has also to be achieved out of profits.

Finally, we may add that the rate of profit is an indicator of the directions in which the community's resources should move. It is a guide for the optimum allocation of the available resources. Whatever the economic system, no community can ignore the imperative necessity of deriving maximum benefit out of its resources. It can ignore it only to its peril. The punishment will be economic degeneration. Even a communist society is faced with scarce resources and multiplicity of wants. The rate of profit, regardless of the pockets it goes into, will guide the investment. Hence even under a socialist or communist organisation of society, profit will have an essential function to perform.

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CHAPTER XXX

MECHANISM OF EXCHANGE

Nature and Functions of Money

1. Meaning of Money. We have already studied exchange of commodities or determination of value. We have assumed the existence of money. We now turn to the study of money itself and the monetary systems. What is money ? What work does it perform ? Who puts it into circulation, and under what conditions ? These are some of the questions that we proceed to answer now.

Money has been defined in various ways. Some say, '*Money is what money does.*' In other words, anything that performs the functions of money is money. In the widest sense, the term 'money' includes all media of exchange—gold, silver, copper, paper, cheques, commercial bills of exchange, etc. But this definition is too wide. Cheques, bills, etc., have been called *representative money* as they are only convenient representatives of the standard of value. Some writers narrow the definition down to include only the commodity (*e.g.*, gold) that may serve the purpose of money. This excludes bank notes or government currency notes from the category of money. These cannot, logically speaking, be excluded, since they possess all the attributes of money, as we shall see presently. The most commonly accepted view is that "*all media of exchange and payment, whose acceptance the law requires in discharge of debts, may be properly called money*".

Thus according to this view, cheques and bills of exchange and similar other instruments of credit are not to be classed as money. For them the term 'credit instruments' is applied, as we shall see later. The most important characteristic of money is its *general acceptability.* Cheques and bills of exchange are not generally acceptable, nor can their acceptance be enforced by law in discharge of obligations. Bank notes are generally accepted and are, therefore, money.

Money should serve both as a medium of exchange and as a measure of value. *One of the tests whether it should be regarded as money or not is whether a change in its quantity affects the general price level.*

Is bullion, kept as a reserve against notes, money ? No. The notes are no doubt convertible into bullion ; the two are inter-changeable. But the notes are money and the bullion is not. Bullion is not generally and freely accepted as a *medium of exchange.* It is not available as purchasing power.

What about the bank deposits ? *Are they money* ? The individual depositors no doubt regard their bank balances as money. But so long as they lie in the bank they are not money. Only that proportion of bank deposits can be regarded as money which has been converted into circulating media and has come to be used as a medium of exchange.

" Money may be defined as the means of valuation and of payment : as both the unit of account and the generally acceptable medium of exchange.''[1]

2. Difficulties of Barter. Can a community exist without money ? Many primitive societies carried on without money. When exchange is done without the intervention of money, we call it barter. Barter, however, is possible only under extremely simple conditions of exchange. As social organization became more complex through a more minute division of labour and multiplicity of human wants, it was realised that exchange by barter was not a satisfactory method.

There are three fundamental difficulties of a barter economy :

(*i*) *Double coincidence of wants.* Barter requires a double coincidence of wants. If 'A' possesses a cow, for instance, and wants to exchange it for a horse, he has to find a person who not only possesses a horse but also wants a cow. Suppose he meets ' B ' who wants a cow but can only offer sheep. 'A' may then have to find a man who wants sheep and so on until he can get the commodity he wants by a series of barter transactions. It is obvious that this method involves endless inconvenience and risks.

(*ii*) *Lack of a common measure of value.* The difficulties of barter do not end here. Even if two persons, who want each other's goods, meet together, a second difficulty arises : In what proportion the two goods are to be exchanged ? There is no common measure of value. The ratio will be arbitrarily fixed according to the necessities of the two parties or the intensities of their reciprocal demand. One party is bound to suffer under conditions where each exchange is an isolated transaction.

(*iii*) *Indivisibility of certain articles.* Even if an agreement is reached regarding the proportion in which things should be exchanged, a third difficulty may arise when the commodities concerned are indivisible. For instance, take the case of a man who wants to purchase wheat equal to half the value of his cow. With the other half, he wants to purchase cloth in the possession of a third person. How is the cow to be divided ? Many similar situations can be imagined.

The difficulties of barter can be illustrated by taking the example of a French singer who gave performances in an island where money was not in use. She was paid in the form of pigs, goats, fowls, apples, bananas, etc. She had to give the fruits and other things to her pigs and goats to keep them alive. What did she gain ? Nothing. Had she been paid in money for these performances. she would have become rich.

Apart from these difficulties of exchange, under a barter economy, wealth could not be properly stored. It is so because most commodities deteriorate with time, or their value changes, even if they remain physically the same.

3. Evolution of Money. Soon, therefore, it was discovered that exchanges could be greatly facilitated and several other advantages obtained, if one commodity was accepted generally as a medium of exchange. Then, in terms of this commodity, the value of every other thing could be expressed, and the possession of it would entitle a person to purchase anything that was vendible.

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[1] Coulborn, W. A. L.—*A Discussion of Money*, 1950, p. 2.

All sorts of commodities have been used from time to time, as money with varying success. Slaves, cattle, stones, skins, arrows, grain, *cowries*, etc., have all been tried. What was actually used as money depended on the economic development of the community. The hunters naturally used skins and arrows, the nomads used cattle and the agriculturists grain, and so on. Until quite recently grain and cotton were used for making purchases in our villages.

Ultimately, however, it was discovered that precious metals like gold and silver, for reasons to be given presently, were best for this purpose. At first gold and silver were used in the form of pieces of bullion. This involved the inconvenience and errors in exchange. At a later stage, therefore, they were coined into currency to ensure their quality and weight. More recently, paper currency was introduced to circulate side by side with metallic coins. In many cases, coins, at least standard coins, disappeared altogether from circulation, leaving paper notes issued by the Government or the Central Bank as the only currency.

From barter economy to commodity money, from commodity money to paper currency and from paper money to bank money or credit economy—this has been the course of development or trend of evolution of money. In Crowther's words, " That only essential requirement is general acceptability. Money....need not itself be valuable. It must, indeed, be relatively scarce, since it would hardly do if money could be plucked off every tree. But, provided precautions are taken to keep it relatively scarce and, it may be added, comparatively invariable in amount—money can consist of things as worthless as a scrap of paper or the scratch of a clerk's pen in the books of a bank."[1]

The introduction of money removed all the difficulties and inconveniences of barter. No double coincidence was necessary to effect exchange. A commodity could be easily divided and exchanged as desired. A generally acceptable medium of exchange, which would freely pass from hand to hand, was placed at the disposal of the community. A reliable standard for measuring value became available. Storing or transferring of value became easy. Borrowing and lending were facilitated.

The introduction of money has been of incalculable benefit to the consumer. The possession of money gives him a claim on goods and services possessed by others. Money has generalised his purchasing power. In the absence of money, it would have been impossible for the consumer to equi-marginalize his utility from various directions of his purchases. He is thus enabled to maximize his satisfaction.

To the producer, the introduction of money has not been less beneficial. He can now organise production more efficiently and more economically. A producer also has been enabled to maximize his profit, for he is able, with the help of money, to equi-marginalize the productivities of the various factors that he is using in production.

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[1] *An Outline of Money*, 1950, p. 21.

The introduction of money has conferred many advantages on the community in general. It is on the basis of money that the great superstructure of credit has been built up. It is difficult to see how trade and industry could ever have been developed beyond the most primitive stage without the facilities offered by the existence of money. The optimum distribution of economic resources and the efficient functioning of the modern economic system will be out of the question without the monetary apparatus.

4. **Functions of Money.** We have seen that different commodities have been selected as money from time to time, and that precious metals like gold and silver, and later paper, ultimately proved to be the best. Best for what ? Best for performing the functions of money.

What functions does money perform ? Money performs five very important functions :—

(*i*) It serves as a medium of exchange.

(*ii*) It is used as a store of value. In more modern terminology, it helps to keep resources liquid.

(*iii*) It is a standard for measuring values.

(*iv*) Money serves as a standard for deferred payments.

(*v*) It transfers value.

Money as Medium of Exchange. We have already referred to the various inconveniences arising out of barter. Money solves all the difficulties of barter. There is no necessity for a double coincidence of wants in a money economy. The man with the cow, who wants to purchase a horse, need not hunt for a horse-seller who wants a cow. He can sell his cow in the market for money and then purchase a horse with the money thus obtained. The convenience is very great when the person has to sell his services or goods in an unfinished state which no consumer in the narrow sense wants. They can be easily turned into money, the general purchasing power. The difficulty of indivisibility of certain articles is also eliminated. Money units are of all denominations and it is easy to make fractional purchases, which are not possible under most cases of barter.

Money as Liquid Assets. Money serves as a store of value, or more correctly it enables a person to keep a portion of his assets liquid. Liquid assets are those which can be used for any purpose at any time one likes. Most persons in the modern world have to keep currency notes in their pockets or at home, or they may keep current accounts with the banks withdrawable by cheque. The necessity arises from the fact that the stream of income and that of expenditure do not keep time with each other. An employer has to pay wages, etc., periodically, even daily, while his income does not come to him in the same periodical intervals. Money is best kept as a store of value.

Money as a Standard Measure of Value. One inconvenience of barter, as noted, was the lack of a common measure of value in terms of which other values could be expressed and added and accounts kept. Money removes this difficulty too. In a money economy, it is easy to compare the respective values of commodities and services. They are in proportion to their respective prices. Expression of values in prices enables us to add them up and have a definite idea of a person's or a community's wealth. In matters of exchange, a common standard of value makes the transaction easy and also fair.

Money as a Standard of Deferred Payments. Money also serves as a standard of payments made after a lapse of time. Lending and borrowing, therefore, must take place in terms of a commodity which will, reasonably speaking, keep its value stable over time. Most commodities deteriorate with the passage of time. But if the money material is properly selected and managed, its value can be kept more stable than that of other articles. By serving as a standard measure of payments over time, money makes borrowing and lending much less risky. Thus it helps in stimulating all kinds of economic activity which depends on borrowed money or credit.

Functions of money have been summed up in a couplet :

> "Money is a matter of functions four,
> A medium, a measure, a standard, a store."

It should be noted that all these functions of money are not independent of each other. Money is kept as liquid assets, for instance, because it serves as a medium of exchange. It is accepted as a medium of exchange because it has comparative stability of value. For the same reason, it serves as a standard for deferred payments and measure of value.

Money as a Means of Transferring Value. There is another function which money performs. One can sell one's immovable and movable belongings at one place and buy them elsewhere. Value will thus be transferred. Such things have happened on a very large scale in India after the partition of the country.

5. Qualities of Good Money Material. From the above, it should be clear that, in order to perform its functions most efficiently, the money material used must have certain qualities :

(*a*) *General acceptability.* A commodity which is not universally accepted in the country cannot serve as money satisfactorily. People accept a thing either because they are sure that others will accept it from them on the same terms, or because they can put them to some alternative uses. Gold and silver are universally, acceptable. Currency notes are accepted because people are sure they can pay them back in their purchases or in the last resort to the issuing authority in return for value received.

(*b*) *Portability.* The material used for money should be easily portable. In other words, it should contain large value in small bulk. Coal, for instance, is not a good money material while gold, silver and paper are.

(*c*) *Cognizability* is another essential quality. Cognizability implies the quality of being readily recognised. If you have to carry a special apparatus to test the genuineness of the money material, considerable inconvenience will be caused. Circulation in the form of coins and currency notes of recognizable designs meets this difficulty.

(*d*) *Homogeneity*. The material should be of uniform quality. If the quality is not uniform, it will not contain the same value in the same bulk.

(*e*) *Divisibility*. The material should be capable of being divided into smaller parts without loss of value. For instance, a diamond when cut into pieces does not have the same value as that before division. Cattle cannot be divided at all without ceasing to be cattle. But gold and silver can be thus divided.

(*f*) *Durability*. Perishable commodities are not suitable materials for money. They lose their value after a time. Animals, for instance, may fall ill, get weak or die. The same applies to perishable goods.

(*g*) Above all, money should be comparatively *stable in value*, since it has to serve as a standard for measuring other values. Gold and silver again are more stable in value than other commodities. Since they are durable, large stocks of these metals are available, though not large enough to make them very cheap. The annual production forms a small proportion of the stock already in existence, and thus affects their value very little.

The stability in value of paper money depends upon the artificial control over its issue. A well-managed paper money, therefore, is the best of all. Among other things, it gives a cheap monetary system.

6. Coins and Coinage. Money may be (*a*) metallic money and (*b*) paper money. Metallic currency or coins are pieces of metal of particular fineness and weight with both sides stamped with the symbols of the government of the country. The edges of the coins of higher values are usually milled to save deterioration and also as a means of detecting any tampering with the coin. The guiding principles of good coinage are : (*a*) The coins should be of convenient sizes ; (*b*) they should be so designed that the wear and tear through circulation is reduced to the minimum ; (*c*) their design should be such as to make counterfeiting and clipping impossible ; and (*d*) they should bear an artistic official stamp.

Our silver rupee, prior to World War II, consisted of 180 grains of silver, 11/12 fine. The word fineness is used to indicate the proportion of pure metal in the coin. *Remedy allowances* are the limits within which a coin may vary in weight or fineness without ceasing to be legally acceptable. It is also called 'tolerance of the mint'. So far as our rupee is concerned, the remedy in weight is 1/5000 and remedy in fineness 1/2000.

Coinage may be *gratuitous* or *free*. In the former case, no charge is made for coinage by the authority. In the latter, no restrictions are placed upon coinage. Anybody can take the metal to the mint and get it coined. Thus India had free coinage of silver before 1893. But free coinage need not be gratuitous. The authority may make a charge for coining. If this charge is equal to the cost of converting bullion into coin, it is called *mintage* or *brassage*. If it is higher than this cost, it is known as *Seigniorage*. Seigniorage may be charged by including an alloy in the coin or by a direct charge.

Token Coins. Metallic currency may be full-bodied coins or token coins. A full-bodied coin is one the face value of which is equal to the value of the metal contained in it. A token coin has a face value higher than its value as metal. The Indian rupee is a token coin. Its value as metal is only a fraction of a rupee. Before 1893, the Indian rupee was a full bodied coin. If melted it could be sold for a rupee worth of metal.

Sometimes the price of the metal in the token coin may rise so much as to make it a full-bodied coin. Then it begins to be melted or hoarded. For instance, in 1917, owing to the rise in the price of silver, the Indian rupee ceased to be a token coin and began to disappear from circulation. The Government had considerable difficulty in supplying adequate quantity of rupees. Similarly in 1940, standard rupees of 180 grains 11/12 fine began to disappear from circulation. The Government then issued new rupee coins (quaternary coins) with much less silver content. They contain ½ instead of 11/12 silver. The danger of their being hoarded is negligible. The old standard rupee has been demonetized. It can no longer be paid in the discharge of a debt. In 1946, nickel rupees were introduced.

Token coins are usually subsidiary coins though, as in the case of the Indian rupee, even the chief coin may also be a token one. The Indian rupee is a mixture of the standard and the token. It has been called a note printed on silver (though it is nickel now). The subsidiary coins are always token coins. Subsidiary coins are used for making small payments. For instance, pice, anna, and two-anna and four anna pieces are subsidiary coins.

Limited and Unlimited Legal Tender. Coins may be limited legal tender or unlimited legal tender. A legal tender currency is one in terms of which debts can be legally paid. It is an offence to refuse to accept payments in legal tender money.

A currency is *unlimited legal tender* when debts *up to any amount* can be discharged by its use. It is a *limited legal tender* when payments *only up to a given limit* can be made by means of it. For instance, rupee coins and rupee notes are unlimited legal tender in India. And so is the half-rupee coin. But coins of lower denominations are only limited legal tender. They are legal tender only up to ten rupees.

When a coin is worn out and becomes light beyond a certain limit then it ceases to be legal tender. When one-rupee and half-rupee coins are more than 20% below the standard weight, they are no longer legal tender.

A government may take away the legal tender quality of a currency. For instance, the old rupee coins of 180 grains 11/12 fine are no longer legal tender in India. In 1946, the Government declared currency notes of Rs. 500 denominations and above as no longer legal tender. It is usually done to bring such currency out of the hoards.

Standard Money. Standard money is that with reference to which the value of all other forms of money is measured. It is the highest form of money. It either embodies the monetary standard or most closely represents it. Usually a metal is selected into which the money unit is made convertible at a fixed rate. Sometimes two metals serve this purpose. When the standard metal is only one, the monetary system is known as *Monometallism.* When two metals are used, the system is called *Bimetallism.* Again if the metal selected is gold, it is called a gold monometallism or Gold Standard ; and if the metal is silver, it is a Silver Standard.

Sometimes a country fixes the value of its currency in terms of the currency of a foreign country. Then it is called an Exchange Standard. If the foreign country is on gold standard, the currency system of the country concerned will be Gold Exchange Standard. Thus India linked its rupee with the English currency early in the present century. England was on gold standard. India was thus on gold exchange standard. When England left gold in September 1931, the rupee was linked with sterling. India was then on Sterling Exchange Standard. Since India has joined the I.M.F., the sterling link of the rupee has been broken, at any rate in theory. The value of the rupee is now equal to 0·186621 grains of gold. That is why now the Indian Standard may be called Gold Parity Standard.

7. Paper Money. The term 'paper money' applies to bank notes and government notes which pass from hand to hand without difficulty and without question. The term does not generally apply to cheques and bills that have only a limited circulation.

Paper money is of two types—convertible and inconvertible. The former is that which can be converted into standard coin (or standard metal) at the option of the holder, the latter is not converted in this sense.

The convertibility of paper money is necessary both to inspire confidence in the minds of the people and to keep its issue within certain limits. As we shall see later, an increase in the supply of money, unaccompanied by a corresponding increase in demand for it, lowers its value in a similar way as happens in the case of any other commodity. The issue of paper money, therefore, is normally regulated by the law of the State. One method of such regulation is to make it convertible into coins or standard metal.

The greatest danger of inconvertible paper money is the possibility of its over-issue. It is a great temptation to a government, especially in emergencies like war, to increase their resources by printing more notes and to use them as purchasing power. There are many examples of such over-issue in the currency history of the world ; Germany during and after the First World War is an extreme example. Excessive note issue took place in India, too, during the war (1939-45).

The student should keep clear of a misconception that it is exchangeability of paper money into gold and silver which makes it more valuable. What gives value to money is the government stamp and what maintains its value is a control over its quantity.

8. Bank Money. Bank money consists of the various instruments of credit. In Keynes's words, "Bank money is simply an acknowledgment of a private debt, expressed in the money of account, which is used by passing from one hand to another, alternatively with money proper to settle a transaction."

Bank money takes various forms. Among these are cheques, bills of exchange, banker's drafts, etc. We shall discuss them in detail in a subsequent chapter. Here it may be noted that, strictly speaking, credit instruments are not money since they are not universally acceptable. Bank money or 'cheque-created money' is, however, quantitatively the most important now in all modern communities. Just as metallic money superseded the other commodities of money and was in course of time superseded by paper money, in the same manner bank money has superseded all types of money in modern times. Cheques or bank money are superior to other forms of money in that they are convenient for mailing, for paying exact sums, for providing receipts in the form of counterfoils and on account of being safe against being stolen or misplaced.

9. Money of Account. Money of account is the monetary unit in terms of which the accounts of country are kept and transactions made, *i.e.*, in which general purchasing power, debts and prices are *expressed.* The rupee, for instance, is our money of account. Sterling, dollar, franc and mark are the money of account respectively of Great Britain, the United States, France and Germany.

All these units are also the circulating media in the above countries respectively. But it need not be so. Money of account may be different from the money actually circulating in a country. For instance, on account of inflation the German mark got heavily depreciated in 1922-24. People lost faith in it, since no one knew what the value of the mark would be the next day, even the next hour. It was risky to enter into transactions in terms of currency with so uncertain a value. Mark, therefore, ceased to be the money-of- account. People entered into transactions in terms of the American dollar which was the most stable currency at the time. Guineas in England and pies in India do not exist and do not serve as a medium of exchange. They are simply 'money-of-account'. Keynes brings out the distinction between *money* and *money of account* thus : "Money-of-account is the *description* or *title* and money is the *thing* which answers to that description."[1]

10. Some other Forms of Money. There are certain other terms which are used in discussions relating to money. They are: Commodity Money, Fiat Money and Managed Money. Keynes defines them as below[2] :—

" *Commodity Money* is composed of actual units of a particular, freely-obtainable, non-monopolised commodity which happens to

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1. Keynes, J. M.—*A Treatise on Money*, 1950, Vol. I, pp. 3-4.
2. *Ibid.*, p. 7.

have been chosen for the familiar purpose of money, but the supply of which is governed—like that of any other commodity—by scarcity and cost of production.

Fiat Money is Representative Money. (*i.e.*, something the intrinsic value of the material substance of which is divorced from its monetary (face) value—now generally made of paper except in the case of small denominations) which is created and issued by the State, but is not convertible by law into anything other than itself, and has no fixed value in terms of an objective standard.

Managed Money is similar to Fiat Money, except that the State undertakes to manage the conditions of its issue in such a way that, by convertibility or otherwise, it shall have a determinate value in terms of an objective standard." It is a hybrid between commodity money and fiat money. Like the commodity money it is related to an objective standard of value, and like the fiat money it is only representative money and has no intrinsic value of its own.

11. Gresham's Law. There is an important law in connection with coinage associated with the name of Sir Thomas Gresham, the Financial Adviser of Queen Elizabeth. Queen Elizabeth was anxious to reform the English currency debased by her father, Henry VIII. But she was puzzled by the fact that whatever new coins she put into circulation they disappeared. Sir Thomas Gresham was asked to throw light on this and the explanation he offered has been dignified into a law known after his name.

Gresham's Law can be briefly put as '*bad money drives good money out of circulation.*'

How does it operate ? Gresham's law operates in three ways : (*a*) Good money is hoarded ; (*b*) good money is melted ; and (*c*) good money is exported. In these ways, good money disappears.

By 'good money' here we mean new full-valued coins of standard weight and fineness ; and bad money is that which has beeen debased or is worn out so that it is of less value.

When does Gresham's Law operate ? This law operates under three circumstances : (*a*) When full-valued coins and debased, counterfeit or worn-out coins circulate side by side ; (*b*) when metallic money and depreciated paper money circulate side by side ; and (*c*) under bimetallism, *i.e.*, when there are two standard (principal) coins—both unlimited legal tender, both subject to free coinage and both having metallic value equal to their face value. (The operation of Gresham's Law under bimetallism is explained in the next chapter).

Limitations of the Law. It will not operate (*a*) if there is shortage of currency, and (*b*) if there is strong public opinion against bad money in which case it is bad money which will have to go.

12. Indian Monetary System. The principal coin in India is the rupee which at present is almost wholly made of nickel. Its intrinsic worth is not more than two-three annas. The rupee is the money of account and a standard measure of value. Next is the 8-anna piece whose metallic make-up is like that of the rupee. Both are unlimited legal tender. Then we have small coins—4-anna piece, 2-anna piece, anna, half-anna, and pice and pie. The pie was used only in accounting and was not found in circulation. These coins are limited legal tender and are legal tender up to ten rupees only.

The decimal system of coinage was introduced from 1st April, 1957. Under the new system, the Indian rupee continues to be the standard coin. But instead of being divided into 16 annas, 64 pice and 192 pies as before, it has been divided into 100 equal parts called *Naye Paise,* the half-rupee and quarter-rupee being equal to 50 *Naye Paise,* and 25 *Naye Paise* respectively. The existing two-anna, one-anna, half-anna and pice coins have no counterparts in the new system. The coins of higher denominations. *viz.,* 25 and 50 *Naye Paise* and the new rupee (100 *Naye Paise*) will be introduced at a subsequent date. For the present, *Naya* 10-*Paisa*, 5-*Paisa* 2-*Paisa* and 1-*Paisa* coins have replaced the coins below quarter-rupee. For some time, the old coins will circulate side by side with the new coins and there is a provision for the conversion of the existing coins into new ones. Retention of some old familiar coins and provision for conversion at the intermediate stages will make the transition to the new system easy. It has been decided to spread the process of changeover to the decimal coinage over three years.

Decimal system is considered to be essential for making calculations easy and quick. This system has been adopted in 105 out of 140 coin issuing countries, the U.S.A. leading the way in 1786 and France following in 1799. The U.K. is an exception.

We have no standard coin *i.e.,* coin whose intrinsic or metallic value is equal to its ' face ' or official value. None of our coins is a full-valued coin. They are all token coins. Our rupee is unlimited legal tender, but it is a token coin. Its metallic value is much less than its safe value. As already mentioned, it has been called a ' note printed on silver '. It would be more correct to say now that it is a note printed on nickel. Our rupee thus is a mixture of the token and the standard coin.

Besides metallic money, we have paper currency too. Our notes are of the denominations of Rs. 10,000, Rs. 5,000, Rs. 1,000, Rs. 100, Rs. 10, Rs. 5, Rs. 2 and Re. 1. Currency notes were first issued in India in 1839 by the three Presidency Banks—the Bank of Bombay, the Bank of Madras, and the Bank of Bengal. But the note-issue was taken over by the Government of India in 1861. They were issued on the fixed fiduciary principle (or partial deposit system) embodied in the Bank Charter Act of 1844 in England. The uncovered portion of note-issue was at first fixed at Rs. 4 crores and beyond that cent per cent reserve had to be kept. This limit was gradually raised. The Hilton Young Commission recommended the adoption of the proportional reserve system. The Reserve Bank of India took over the note-issue in 1935. According to the Reserve Bank Act, our paper currency must have a full backing consisting of rupee coins, Government of India (rupees) securities, gold coins and gold (British Government) securities, provided that gold and gold securities must at least be 40 per cent of the total reserve, and the quantity of gold coin and bullion must at least be worth Rs. 40 crores. All notes, *except one-rupee notes,* are convertible into rupees. The Reserve Bank of India

(Amendment) Act 1956 changed the proportional reserve system to that of fixed minimum, and prescribed a minimum holding of foreign securities of Rs. 400 crores and of gold and bullion of Rs. 115 crores. According to an amendment in 1957, the statutory minimum was drastically cut down to Rs. 200 crores including Rs. 115 crores worth gold.

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CHAPTER XXXI

MONETARY SYSTEMS

1. Bimetallism. Various monetary systems or monetary standards have been adopted in practice from time to time. These are (*a*) *Bimetallism*, (*b*) *Monometallism*, silver standard or gold standard, and (*c*) *Paper Standard.*

Under Bimetallism, both gold and silver are standard metals. A ratio is fixed by law between their values, and the ratio is maintained by the currency authority. Coins of each of the metals are unlimited legal tender. Sometimes both coins are unlimited legal tender but only in one there is free coinage. This was the case in France where the silver franc was not subject to free coinage. Such a standard is called '*Limping Standard*'.

Bimetallism was adopted by France in 1803. The ratio between gold and silver was fixed at 15½ oz. of silver for one oz. of gold. France was able to maintain this ratio for about fifty years. Due to discoveries of gold in 1848-50, the supply of gold increased and its market value, relatively to silver, fell. Variations in the market ratio led to the operation of Gresham's Law under which the cheaper metal drives the dearer one out of circulation. It is difficult for one country to maintain the ratio between two metals for long. A number of countries together may.

It was with this end in view that France, Belgium, Italy and Switzerland founded a monetary union in 1865. A few years later Greece, Servia, Rumania and some South American States also joined this union. But this union was also unable to maintain bimetallism which broke down in 1874 when the price of silver fell in terms of gold.

During the last quarter of the 19th century several attempts were made to establish bimetallism on an international scale. But the plan could not succeed without the co-operation of the United Kingdom. The latter country did not want to change her monetary standard.

Bimetallism was favoured by the United States to safeguard her silver interests. India closed her mints to the free coinage of silver in 1893 thus depressing the price of silver, which was already falling since 1874, due to increase in its production and its demonetization by several countries. In 1897 the Government of India were asked whether they would reopen the Indian mints to the free coinage of silver if France and the United States opened theirs to the free coinage of gold as well as silver. The Government of India did not favour this suggestion. Thus the mints of France and the U.S.A. also remained closed to the free coinage of silver.

Another motive for establishing international bimetallism was to increase the supply of money in the face of increasing production in the world. When two metals are legal tender naturally more money is available for carrying on transactions. The development of banking and the use of paper money and credit instruments supplied this need, and ultimately the idea of an international bimetallism was given up.

Merits and Demerits of Bimetallism. Several merits are claimed for bimetallism: (1) Ample supply of media of exchange is assured, there being two metals of which money can be minted. (2) The banks will find it easy to keep the necessary cash reserves against liabilities, both silver and gold coins being unlimited legal tender. (3) The government can meet its requirements of cash more easily than would be the case under monometallism. (4) Bimetallism is supposed to facilitate international trade as par of exchange can be established with all countries whether on gold or silver. (5) Bimetallism has been advocated in preference to universal gold standard on the ground that the stock of gold in the world will not be enough to cope with the demand for monetary purposes. (6) Arguments in favour of bimetallism acquired greater force in the last quarter of the 19th century when the price of silver registered a phenomenal fall. It was thought that the adoption of bimetallism by all countries would arrest this fall. (7) It was claimed that the bimetallic standard would be more stable. It was expected that fall in the price of one metal may be counteracted by rise in that of the other.

Case against Bimetallism. People were convinced that unless adopted internationally, bimetallism had no chance of functioning successfully and of this there was little prospect. Adopted by a single country, bimetallism was sure to degenerate into an *alternative* standard (either gold or silver) through the operation of Gresham's Law.

The world has now discovered a much cheaper medium of exchange, *viz.*, paper, and bimetallism is unnecessary to ensure ample supply of currency. The paper currency is as good a reserve for the banks as any. The issue of paper money also enables the governments to tide over their financial difficulties during a period of stress and strain.

The technique of foreign exchanges has been so perfected that international trade can be promoted even without having a bimetallic standard.

Paper being now the real medium of exchange, all arguments in favour of bimetallism intended to meet the shortage of supply of precious metals have lost their force.

As for stability, gold or silver monometallism has manifested much greater stability. It has been remarked that one sober person will be able to walk much more steadily than two tipsy fellows with their arms interlocked.

Divergences, almost daily, between the mint ratio and the market ratio of the two metals are sure to cause confusion in trade, engender speculation and create complications in the working of the monetary system. In the words of Coulborn, "It (working of bimetallism) is a record of commercial dislocation and national rivalry engendering, for example, egocentric patriotism of the mercantile system.''[1]

Can the official mint ratio between gold and silver under bimetallism be maintained ? The advocates of bimetallism say "yes". They point to what has been called the *compensatory action* of the bimetallic standard. It is said that any divergence between the mint and the market ratio will let loose forces which will remove this divergence. The following example will make this clear :

Suppose the mint ratio between gold and silver is 1 : 15. This means that one gold coin is equal to 15 silver coins. Now, suppose that, in the market, the relative prices of the two metals have so changed that the ratio is 1 : 16. Now it will be to the advantage of a person to go to the market and exchange one gold coin for 16 silver coins, put one in his pocket and exchange 15 silver coins for one gold coin ; and repeat the process. If many people do like this, as they may be expected to, demand for silver in the market will be increased, and its price must rise. This process will go on till the rise in the price of silver is sufficient to restore the old ratio 1 : 15 which was equal to the mint ratio. If, on the other hand, gold becomes cheaper, so that the ratio becomes 1 : 14 instead of 1 : 15, then demand for gold will be stimulated and the previous ratio will be restored sooner or later.

The compensatory action looks perfect in theory. But it will be a perpetual see-saw. The market rates must vary from day to day so that either gold coins are driven out of circulation or the silver coins are driven out. This does not speak well of the stability of a monetary standard. It is no wonder that there are few advocates of bimetallism now. It is no longer a live issue.

2. Silver Standard. Under a silver standard, the value of the monetary unit is fixed and maintained in terms of silver. This is usually done by the free coinage of silver into coins of a given weight and fineness. India, for instance, was on silver standard from 1835 to 1893. The rupee was freely coined and its weight was fixed at 180 grains 11/12 fine.

This system made the expansion and contraction of currency automatic but the trouble arose when the gold price of silver began to fall seriously after 1874. It paid people to purchase silver cheaper and get it coined into rupees from the mint. This led to a general rise in prices due to the increase in the amount of money in circulation. Our import trade suffered, because more silver rupees were required to pay for imports of a given value in sterling. The burden of India's sterling obligations (Home Charges as they were called) also increased for the same reason. Difficulties thus arose in balancing the Indian Budget. Ultimately, on the recommendation of a committee (the Herschell Committee) of experts, the Indian mints were closed to the free coinage of silver. Thus ended the silver standard in India.

The general principles of the working of the silver standard are the same as those of the gold standard discussed below. Gold standard, however, is preferable to silver standard, because the yellow metal is far less subject to fluctuations in its value than silver.

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[1] *A Discussion of Money*, 1950, p. 125.

3. **Gold Circulation Standard.** This is also called Full Gold Standard. A country is on a full gold standard when gold serves not only as standard of value but also circulates as coins. Before 1914 Britain had this kind of gold standard and so had the U.S.A., France, Germany and other European countries. Gold provides for the currency a solid and tangible security. It also helps those who have to travel abroad, for they can carry their own currency and be sure of its acceptance anywhere in the world. It is called the traditional or the orthodox gold standard.

We may illustrate its working from the example of pre-1914 Britain. Gold circulated in the form of sovereigns of a given weight (113·1/623 grs.) of pure gold, plus a little alloy. The actual weight of the sovereign was 123·27447 grains 11/12 fine. In other words, one ounce of gold 11/12 fine could be coined into £3 17*s*. 10½*d*. in English money. Actually the Bank only gave £3 17*s*. 9*d*. for every ounce of such gold. To purchase an ounce of standard gold from the Bank one had to pay £3 17*s*. 10½*d*. per oz. Under this system, therefore, the purchasing power of a British sovereign could not rise appreciably above or fall appreciably below 123·27447 grains of gold 11/12 fine or 113·1/623 grains of pure gold.

The system could not be maintained during the World War 1914-18, and had to be given up. In April 1925, Great Britain restored the Gold Standard but of a different variety, *viz.*, the Gold Bullion Standard.

4. **Gold Bullion Standard.** Under this system, the value of the currency is fixed in terms of gold by making such currency convertible into gold (bullion not coin) and *vice versa*. But gold does not circulate as coins.

In the United Kingdom under the Gold Bullion Standard, the Bank of England was willing to buy any amount of gold at £3 17*s*. 9*d*. per ounce 11/12 fine and to sell it in minimum amounts of 400 ounces, at £3 17*s*. 10½*d*. This was the same rate as before 1914. Gold was allowed freely to move into or outside the country. No gold coins circulated. The idea was to make gold available only for foreign payments.

The Gold Bullion Standard was adopted in India in 1927 on the recommendation of the Hilton Young Commission. The currency authority was placed under an obligation to buy or sell gold at rates announced beforehand subject to a minimum of 400 ozs. of gold. The Commission claimed that it had all the advantages of a full gold standard *minus* its disadvantages.

(*i*) It is economical as no gold coins have to be minted and put into circulation. In their daily dealings, the public use a cheap medium of exchange, either paper money or rupees.

(*ii*) It makes for national prestige, because gold is made freely available both for use inside the country and for exporting it abroad and not merely for exchange purposes as under the gold exchange standard.

(*iii*) The paper currency under gold bullion standard has a more tangible and solid backing. It is convertible into gold. But, under the gold exchange standard, one token (currency note) is convertible into another token (rupee).

(*iv*) It is also claimed that an automatic mechanism for expansion and contraction of currency is maintained. The currency will be expanded when gold is sold to the currency authority and it will be contracted when gold is purchased by the public.

(*v*) It is considered that gold kept as a reserve in the central bank is much more useful and gives more valuable support to the national currency than gold put into circulation.

(*vi*) The gold bullion standard provided for the public the ability to obtain gold and liberty to melt or export it.

But these merits of the gold bullion standard are more or less theoretical ; at any rate, they turned out to be so in the case of India. For the average man the convertibility of notes into gold was a farce, for who could bring sufficient paper money to purchase 400 oz. of gold (400 oz. = 1065 tolas) ? Thus, under gold bullion standard, automatic expansion and contraction of currency was not brought about.

In 1931, England went off the gold standard and so did India. The gold bullion standard made an exit, 'unwept, unhonoured and unsung'.

5. Gold Exchange Standard.[1] The first country to adopt gold exchange standard seems to have been Holland, which it did in 1877. Russia followed Holland in adopting it in 1894. Austria-Hungary too adopted it at the same time. The credit, however, of perfecting it and working it effectively, belongs to India where it started functioning in 1907. The Philippine Islands has established it a few years earlier. The Genoa International Conference held in 1922 passed a resolution recommending the adoption of the gold exchange standard. India was on this system when the war of 1914-18 broke out.

Under this system, the internal currency consisted of silver rupees which were token coins and paper notes, but for foreign payments sterling (convertible into gold in London) was sold by the Government in return for rupees at a fixed rate. In London, the Secretary of State sold rupees (called Council Bills since they were sold by the authority of the Secretary of State-in-Council) to those who wanted to make payments to India. When the Government of India sold drafts on the Secretary of State, they were called ***Reverse Councils***. The rates[2] for buying and selling of rupees were fixed in such a way as to keep the sterling-rupee ratio at 1*s*. 4*d*. or near about.

The gold exchange standard necessitates the keeping of two reserves, one in the country which has adopted it in the form of home currency, and the other at a foreign centre. The successful functioning of the system depends on the adequacy of these reserves. The Government of India maintained a reserve for the purpose called the Gold Standard Reserve.

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[1] *See* "International Currency Experience," League of Nations, 1944, Ch. II.

[2] Before the war of 1914-18 the selling and buying rates of the rupee were 1*s*. 4*d*. and 1*s*. 3-29/32*d*. respectively, the former in London (Council Bills) and the latter in India (Reverse Councils).

The system broke down during the war of 1914-18 due to great demand for rupees accompanied by an excessive rise in the price of silver. High price of silver made the rupee a full-valued coin (instead of being a token coin that it was) leading to its melting and hoarding. The Government was unable to supply rupees at the old rates. First the rate was raised but later the attempt to maintain the rupee in terms of the sterling was given up.

After the war (in 1920), the gold exchange standard was again tried at 2*s.* (gold) per rupee, but had to be given up. This time for opposite reasons, *viz.*, a fall in the price of silver accompanied by a great demand for sterling due to excess of imports over exports. The Government was unable to sell sterling (by rupees) at 2*s.* gold or even at 2*s.* sterling.

The essential features of a gold exchange standard are : (1) The monetary standard is fixed either directly or indirectly in terms of a certain number of grains of gold. For instance, the Indian rupee was made equal to 7·53 grains. (2) The local currency is pegged to a foreign currency and the local mints are closed to free coinage so that there may be no difficulty in maintaining its value. (3) It is essential to maintain in the 'planet' country a reserve in gold and in the 'satellite' country a reserve in the local currency to provide resources for the maintenance of the exchange value of the currency. (4) To ensure that the actual rates of exchange do not vary widely from the fixed rate, drafts are sold freely in both countries.

Among the advantages claimed for the gold exchange standard one was that it gave all the advantages of the full gold standard without involving the use of gold. It is thus economical. Moreover, linking the rupee with the sterling was said to benefit India, because of her considerable trade relations with Great Britain and the financial status of London in the international field. International payments, when made through sterling, were considerably facilitated, while the sterling link gave the rupee a high status. The general advantages of such a system are : (1) it is economical ; (2) it facilitates foreign trade ; (3) it keeps the external value of the currency stable, and (4) possibly it may also make for comparatively stable price levels.

Defects of the Gold Exchange Standard. Gold exchange standard, as it worked during the inter-war period, was criticised on several grounds. In the first place, it was charged with breeding inflation. But it was really anti-deflationary rather than inflationary. Secondly, the central banks did not follow any concerted or uniform policy in their reliance on exchange reserves as against gold, so that their isolated actions tended to produce a financial chaos. Thirdly, keeping of reserves in the form of a foreign currency was deemed to be a blow to national prestige. Fourthly, it was considered to be a British fad and disliked by many countries on that account. Fifthly, there was an inherent danger of depreciation of the foreign currency in which the reserve was kept. Sixthly, it was said that unlike gold movements, the movements in foreign exchange reserves did not bring into play the reciprocal tendency towards contraction or expansion of currency.

So far as the working of this standard in India is concerned, the gold exchange standard was criticized by the Hilton Young Commission in scathing terms. The following points may be mentioned in this connection.

(*i*) It is too abstract, far from simple and 'unintelligible to the uninstructed public'. Not even educated Indians could easily understand its working. Such a system could not inspire popular confidence or enthusiasm. It made the currency authority a suspect in the eyes of the public.

(*ii*) As the system operated in India, there was unnecessary duplication of the reserves. There were three reserves in India—the Gold Standard Reserve, the Paper Currency Reserve and the Government of India's balances. These reserves had their counterparts in England.

(*iii*) The system was not automatic. In its operation, it depended too much on the will of the currency authority.

(*iv*) It lacked elasticity. Expansion of currency did take place in India when rupees were issued to meet Council Bills, but once issued, the rupees remained in circulation. There were no means by which contraction of currency could be effected.

(*v*) A very serious defect is that currency policy of one country becomes subservient to that of another country. The Indian rupee was subject to all the misfortunes to which the English currency may have been subjected to.

(*vi*) The Hilton Young Commission was of the opinion that the gold exchange standard had inherent defects and it was not possible to correct them. They came to the conclusion that it could not be mended, it must be ended. Accordingly, they recommended its replacement by the gold bullion standard.

6. Gold Parity Standard. The latest to enter the list of gold standards is the *gold parity standard.* This is the type which is supposed to prevail under the aegis of the International Monetary Fund. Under this system, no gold coins are put in circulation. Gold does not serve as a medium of exchange. The internal currency consists largely of notes and some form of metallic money but certainly not of gold, nor are these notes convertible into coins as under the full gold standard, nor into gold bullion as under the gold bullion standard, nor into particular foreign currency based on gold as under the gold exchange standard. But the only respect in which gold comes into play under this system is that the currency authority takes upon itself the obligation of maintaining the exchange rate of the domestic currency stable in terms of a certain quantity of gold. This is the type of gold standard which the member countries of the I.M.F. may be supposed to have.

7. Advantages and Disadvantages of Gold Standard. Several advantages are claimed for the gold standard, especially when it is adopted simultaneously by a number of countries, *i.e.*, international gold standard.

(1) It is an objective system and is not subject to changing policies of the government or the currency authority.

(2) It enables the country to maintain the purchasing power of its currency over long periods. This is so because the currency and credit structure is ultimately based on gold in possession of the currency authority.[1]

(3) Another important advantage claimed for gold standard is that it preserves and maintains the external value of the currency (rate of exchange) within narrow limits.[2] As a matter of fact within the gold standard system, it provides fixed exchanges which is a great boon to traders and investors. International division of labour is greatly facilitated.

(4) It gives, in fact, all the advantages of a common international currency. It establishes an international measure of value. As Marshall pointed out before the Fowler Committee (Report on Indian Currency in 1898), the change to a gold basis is like a movement towards bringing the railway gauge on the side branches of the world's railway into unison with the main lines.[3] This greatly facilitates foreign trade, because fluctuations in rates of exchange hamper international trade.

(5) It is further claimed that gold standard helps to adjust the balance of payments between countries automatically. How this happens may be illustrated by a simple example. Suppose England and America are both on gold standard and only trade with each other, and that a balance of payments is due from England to America. Gold will be exported from England to America. The British central bank will lose gold. This will contract currency in England and bring about a fall in the British price level. Price level in America will rise due to larger gold reserves and the expansion of currency and credit. England will become a good market to buy from and a bad market to sell in. Conversely, America will become a good market to sell in and a bad market to buy from. British exports will be encouraged and imports discouraged. American exports will be discouraged and imports encouraged. The balance of payments will tend to move in favour of Britain until equilibrium is reached. It is in this way that movements of gold by affecting prices and trade keep equilibrium among gold standard countries. More of this later.

(6) It inspires confidence and contributes to national prestige, for "so long as nine people out of ten in every country think the gold standard the best, it is the best".

Disadvantages :

(*i*) It is costly and the cost is unnecessary. We only want a medium of exchange ; why should it be made of gold ? It is a luxury.

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1. *See* chapter on Central Banks, Sec. 6.
2. *See* chapter on Foreign Exchanges.
3. Report, Fowler Committee, para 34.

'The yellow metal could trickle the fancy of savages only.'

(*ii*) Even the value of gold has not been found to be absolutely stable over long periods.

(*iii*) Under the gold standard, currency cannot be expanded in response to the requirements of trade. The supply of currency depends on the supply of gold. But the supply of gold depends on the success of the mining processes which may have nothing to do with the factors affecting the growth of trade and industry.

Recently even the gold standard has been a *managed* standard. The central banking technique has been applied deliberately to control the working of the gold standard. It is thus no longer automatic as it was claimed to be.

(*iv*) Gold standard has also been charged with sacrificing internal stability to external (exchange) stability. It is the international aspect of the gold standard which has been paid more attention to.

(*v*) Another disadvantage is that "gold movements lead to changes in interest rates, so that investment is stimulated or checked solely in order to expand or reduce money income" (Benham).

(*vi*) A country on a gold standard cannot follow an independent policy. In order to maintain the gold standard or to restore it (as in England after World War I), it may have to deflate its currency against its will. Deflation spells ruin to the economy of a country. It brings, in its wake, large-scale unemployment, closing of works and untold suffering attendant on depression.

8. Gold Standard in Practice. The advantages of gold standard are only theoretical. They can be obtained only if the countries concerned obey the gold standard rules or "play the game"[1] of the gold standard. Gold standard, on the whole, worked quite smoothly till the war of 1914-18, because the countries concerned did play the game of gold standard. Moreover, since gold also circulated as coins at that time, there was a more intimate relationship between the quantity of gold available in central banks and the media of payments.

The post-war gold standard (gold bullion standard) gave much more power to the central banks to vary the circulating media since the ratio of reserves, kept to support the credit and currency structure, could be varied within wide limits. Gold standard thus ceased to be an automatic system and became "managed" like any managed currency.

9. Rules of the Gold Standard. Gold standard cannot function successfully unless certain rules are observed by the countries on the gold standard :—

First, there should be a high degree of freedom of trade so that disequilibrium arising out of balance of payments may be adjusted through the movement of goods. Gold should only move to cover small gaps.

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[1] **Report of the Committee on Finance and Industry, 1913, pp. 23-4.**

Secondly, the economic structure of gold standard countries should be kept fairly elastic so that prices and wages respond readily to gold movements.

Thirdly—the most important of all—the government and central banks should not offset the effects of gold movements. A country losing gold must allow its price level to fall, and the one that gets gold must allow the price level to rise. When gold comes in, currency should be expanded, and when it goes out, the currency should correspondingly be contracted. As Crowther says, "The golden rule of the gold standard is : expand credit when gold comes in ; contract credit when gold is going out."[1]

Since World War I, these conditions have not been satisfied, and the countries concerned have not observed the rules of the gold standard.

10. Why Gold Standard Broke down? The gold standard broke down in country after country soon after its rehabilitation during the post-1914-18 war decade. There were several reasons for this development.

First, due to general political unsettlement, a habit arose on the part of certain Continental countries to keep their funds for short periods in foreign central banks, especially in Great Britain. These funds were liable to be withdrawn at the earliest danger signal. Withdrawal of such funds from Britain on the part of France led to gold standard being suspended in 1931 in the former country. The Bank of England could not afford to lose its gold resources in large quantities at such a short notice.

Secondly, international obligations in the form of Reparations and War Debts arose out of World War I. Since the creditor countries refused to accept payments in the form of goods and also refused to continue lending to the debtors, the debts had to be cleared through gold movements. This led to concentration of 3/4 of the world's gold in the U.S.A. and France, the two chief creditor countries. The gold left with the other countries was not enough to enable them to maintain gold standard successfully.

Thirdly, the gold-receiving countries did not "play the game of the gold standard". They (especially the U.S.A.) did not allow this gold to have any effect on their price levels. The gold was "sterilised" or made ineffective. Had prices risen in these countries, imports would have been encouraged and exports discouraged and an unfavourable balance of trade would have led to movement of gold in the reverse direction. Since this was not allowed to happen, the gold standard failed to work automatically.

Fourthly, gold standard failed also because the economic structure of the various countries concerned had become less and less elastic after the World War of 1914-18. This was due to several causes. The enormous growth in the indebtedness of governments and local authorities resulted in a mass of interest payments fixed by contract over a long period of years. The huge expenditure in the form of payment to social services could not be easily reduced. The trade unions were now able to offer a much stronger resistance to wage cuts than before 1914. The prices of raw materials and finished goods were becoming more and more fixed by partial monopolies, cartel agreements, etc. The result was that prices no longer moved in the directions warranted by gold movements and equilibrium failed to be restored as of old.

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[1] Crowther, G.—*An Outline of Money*, 1950, p. 304.

Fifthly, another weakness that was discovered in the gold standard in practice was that it was always liable to collapse in a crisis. It has often been called a fair weather standard only.

Another objection that was frequently urged against the system was that gold movements caused inconvenient changes in interest rates. Deflation, for instance, may be made necessary at a time of crisis to prevent suspension of the standard. But deflation, which involves falling wages and prices, may prove a cause of serious trouble. Wage cuts are resisted by trade unions, and falling prices increase the burden of fixed payments which the government or the people may have to make. Moreover, falling prices discourage enterprise and create unemployment.

Thus it was that country after country abandoned the Gold Standard.

11. The Future of Gold Standard. It is unlikely that, after the experiences of the inter-war period, gold standard will be established in the conventional sense by any country of the world. Gold standard worked more or less automatically under the pre-1914 conditions of trade and finance. The experience of inter-war period, however, showed that the gold standard required quite a fair degree of management and still greater degree of co-operation of the gold standard countries for its smooth working. "The gold standard will work if every nation is content to march in step with every other." Unless the rules of the gold standard are observed, it cannot function successfully. Also the rigidities of the economic system stood in the way of proper adjustment of price levels and costs necessary for its successful working.

Moreover, gold had become maldistributed among the various countries, America possessing the lion's share—80% of world stock in 1939. It could not be redistributed without the re-establishment of unrestricted movement of goods. All these things required a high degree of international co-operation. With this co-operation, a managed system can be devised in which gold will not play a prominent role. People had lost faith in the capacity of gold to maintain stability either of price level or of exchange. Gold ceased to enjoy its old prestige. Managed currency, on the other hand, had been successfully tried in several countries (*e.g.*, the U.K.).

On the other hand, gold producing countries, like America and South Africa, especially the former with enormous stock of accumulated gold, could not support a scheme in which gold played no part. Moreover, from the long-period point of view, managed currency without solid foundations of gold did not inspire confidence.

The result has been a compromise in the institution of International Monetary Fund. The Fund is supposed to achieve all the advantages of a gold standard without its disadvantages by international co-operation. Gold still plays a role but not such a dominant role as it did under the gold standard. We shall discuss the I.M.F. (International Monetary Fund) in a later chapter.[1] Thus gold standard of the old type has no future.

12. Functions of Gold Standard.[2] Before we come to the end of the discussion on gold standard, we might notice two important functions which a modern gold standard performs.

(1) *Stability of internal value of the currency.* The first function is to stabilise the internal value of the currency or to stabilise the domestic price level. Whatever the type of gold standard that a country may have, its currency maintains a certain link with gold. Through this link, it controls and regulates the volume of currency in circulation. In England in 1939, the fiduciary issues, which amounted to four-fifths of the total note-issue, was £400 million. Since beyond this sum, the notes had to be backed by 100% gold reserve, the note-issue could not be increased without the increase of gold. Thus gold applied the brakes to the expansion of note-issue. During the war, the fiduciary issue was raised from time to time so that in 1947 it was raised virtually to the level of total note-issue and the gold backing practically vanished. Still further note-issue would become illegal unless there was at the same time an increase in the gold holdings of the central bank. Whatever the law regarding the reserve requirements, no central bank can issue notes *exceeding* its gold holdings without breaking the law of the land. Hence the gold standard ensures that the country's currency is not suddenly and arbitrarily increased. This, in its turn, ensures a comparatively stable price level.

(2) *Stability of external value.* The second important function of the gold standard in modern times is to stabilise the external value of the currency. This is done by imposing on the currency authority (*i.e.*, the central bank) an obligation to buy and sell gold at fixed rates in unlimited quantities. The potential unlimited buyer at fixed rates, therefore, is in a position to fix the market price of gold. The bullion market is at the mercy of this buyer so long as this law is not modified or repealed. In all countries having such legal provisions, there exists a fixed ratio between a unit of the currency and an ounce of gold. This is required by the provisions of the I.M.F. Through gold, the common factors, the currencies of such countries come to have a fixed ratio between one another. As Crowther says, " The gold standard is a device for ensuring that the demand for and supply of a currency *in the exchange market* shall always be equal." Thus gold standard proves to be a special form of pegging.

The present position regarding the gold standard is that it is more of a dollar standard than a gold standard. This is due to the fact that nearly two-thirds of the entire stock of gold of 29 leading countries (excluding the U.S.S.R.) is concentrated in the U.S.A. For some time, the demand for American goods is bound to be very large so that the other countries are likely to lose more gold to the U.S.A. and may be left with the bare minimum to fulfil their reserve requirements. There is little prospect of their acquiring gold through a favourable balance of trade. Whether or not the world "cast impiously aside the golden symbol and substitute the dollar sign" formally, the fact remains that it is the supply of dollars rather than the mechanism of the gold standard that will dominate the monetary relations of the leading nations. Unless the present serious maldistribution of gold is set right, for which a very drastic action will be necessary, gold standard has no chance to rule as against the dollar. In view of the inelastic demand for American goods, devaluation of other currencies in terms of the dollar is not likely to prove very helpful.

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[1] Chapter XLI.

[2] *See* Crowther, G.—*An Outline of Money*, 1950, pp. 281-85.

13. The Causes of Gold Movements. We have referred under the ' Rules of the Gold Standard ' to the inflow and outflow of gold. Let us understand why gold movements take place. Benham has mentioned the following causes of gold flows:[1]

1. *Monetary Policy.* If one country inflates its currency, and the others do not, its prices relative to the world prices will rise. This will check exports and increase imports and, under a free gold standard, gold will flow out.

2. *Capital Movements.* If a country is lending money abroad, balance of payments becomes adverse and gold must move out. But when this happens and the rules of the gold standard are observed, there will be a corresponding contraction of currency (or in technical terms, its money income will be reduced). Prices will correspondingly fall, check imports and stimulate exports. Gold will then tend to return. The country that receives gold will find its money incomes increased (*i.e.*, the currency will expand) and prices will rise. Imports will increase and exports decrease so that it will develop an unfavourable balance to that extent. Then gold will flow out.

3. *Reciprocal Supply and Demand of Goods and Services.* A country which develops a surplus of exports of goods and services will tend to acquire gold, and *vice versa*.

4. *Changes in Population.* If population increases due to increased immigration, demand for money will increase ; its value will rise *i.e.*, prices will fall ; exports will increase, imports will be checked, and gold will tend to flow in. The decrease in population will have the opposite effect.

5. *Changes in Capital.* Increased savings in a country will lead to large accumulation of capital. This will give a fillip to production, output will increase, prices will fall, exports will increase, imports decrease, and gold will flow in.

6. *Changes in Technique.* A marked technical progress taking place in a country will cheapen its production. Imports will be checked, exports will increase, and gold will flow in.

7. *Changes in Demand.* If, on account of any reason, the demand in foreign countries for the goods of a country decreases, then exports will fall off. Other things remaining the same, gold will flow out.

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[1] *Economics*, 1940, pp. 456-59.

" It should be remembered that it is always changes *relatively* to other countries, and not absolute changes, which are important in this context." (Benham)

14. Paper Standard or Managed Paper Currency or Currency Exchange Standard. Under this system paper money is the standard money. The currency authority of the country does not accept the responsibility to convert the paper money into gold. After the Great Depression (starting from 1929), many countries, including Great Britain and India were compelled to give up the gold standard. They were thus led to adopt what may be called the Paper Standard.

The currency authority in India is the Reserve Bank of India. This Bank maintains the value of the rupee in terms of sterling at the ratio 1*s*. 6d. by buying and selling sterling at 1*s*. $6\frac{3}{16}$ *d*. and 1*s*. 5-49/64*d*. per rupee respectively in amounts not less than £10,000. The internal currency consists, as before, of rupee (token) coins and rupee notes of various denominations.

This is a currency exchange standard since the standard is based on the currency of a country and not on gold. If the country concerned was France, it would have been called the Franc Exchange Standard and if the U.S.A., the Dollar Exchange Standard, and so on.

Great Britain is also on paper standard these days, though the British pound-sterling, as a matter of policy, has been kept at fixed value in terms of dollars. In September, 1949, sterling was devalued in terms of the dollar by about 30 per cent.

Even though Great Britain has abandoned gold standard since September, 1931, and sterling is no longer legally convertible into gold, the currency of the country is still regulated with reference to gold reserves in accordance with the Bank Charter Act of 1844, as amended later.

To avoid fluctuations in the external value of the sterling an *Exchange Equalization Account* has been constituted. This Account is under the control of the British Treasury but is in effect a department of the Bank of England. When foreign funds flow into Great Britain (usually for short periods) demand for sterling arises and sterling would normally appreciate in terms of foreign money. Such funds are acquired by the Exchange Equalization Fund and thus abnormal appreciation of sterling is prevented. Conversely, when funds move out of England, demand for foreign currency would normally depreciate sterling in terms of that currency. The Exchange Equalization Account releases gold for such payments and thus saves sterling from abnormal depreciation.

15. The Best Currency System. The question arises : Which is the best currency system ? The answer is not a simple one. Different systems have worked more or less efficiently under different circumstances. A better way of putting the same question would be : What is the test of a good currency system ?

Roughly speaking a currency system must fulfil the following conditions :—

(*i*) It must maintain a reasonable stability of prices in the country. This means that its internal value (or purchasing power in terms of goods and services in the country concerned) must not fluctuate too violently. As we shall see later, this involves regulation of the amount of money in circulation to suit the requirements of trade and industry in the country.

(*ii*) It must maintain stability of the external value of the currency. This means that its purchasing power over goods and services in foreign countries, through its command over a definite amount of foreign currency, should remain constant. This is the problem of foreign exchange, which we have yet to tackle.

(*iii*) It must be economical. A costly medium of exchange is a national waste.

(*iv*) It must be elastic and automatic so that the currency expands or contracts in response to the requirements of the trade.

(*v*) It must be a simple system which an average man can understand.

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CHAPTER XXXII

THE VALUE OF MONEY

1. Introduction. In the previous chapter, we noted that the best monetary system is one which preserves the stability of the internal and external value of money. The question arises : What do we mean by the term 'value of money' ?

The term 'value of money' has been variously used. Thus it may mean (*i*) its command over a definite weight and fineness of gold or silver, as is the case under gold and silver standards respectively, or (*ii*) the units of foreign currency that it will purchase (*e.g.*, one rupee=1*s*. 6*d*.), or (*iii*) its command over goods and services within a country, *i.e.*, the internal purchasing power of money. When we use the term "the value of money" without qualification, we mean it in the third sense.

It should be noted that the value of money, or its purchasing power, has a definite, though inverse, relation with the general level of prices in a country. When general price-level rises, the value of money falls ; conversely, when general price-level falls, the value of money rises. In this chapter, we discuss the causes of variations in the value of money.

2. The Quantity Theory of Money. An Italian writer, Davanzatti, who lived in the 16th century, is supposed to be the originator of the Quantity Theory of Money. It was popularised by Locke and Hume and later taken up by the classical economists. Stated in its simplest form, the Quantity Theory of Money says, that the value of money varies inversely as its quantity. "Double the quantity of money and, other things being equal, prices will be twice as high as before, and the value of money one-half. Halve the quantity of money and, other things being equal, prices will be one-half of what they were before and the value of money double."[1]

The price-level is directly *proportional* to the amount of money in existence. If the quantity of any commodity is increased, its value will fall, and if the quantity is decreased, its value will rise. But the peculiarity about money, which differentiates money from other commodities, is the *proportionality* between the quantity of money and commodity prices.

The theory can also be stated as under :—

The value of money falls (and the price-level rises) *proportionately* with a given increase in the quantity of money. Conversely, the value of money rises (and the price-level falls) *proportionately* with a given increase in the quantity of money, *other things remaining the same.*

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[1] Taussig, F. W.—*Principles of Economics*, Vol. I.

Now what is meant by the phrase "other things remaining the same. It means that there should be no change in the following factors :—

(1) *Velocity of circulation of money.* Velocity or rapidity of circulation of money means the number of times a money unit changes hands. If, for instance, during a given period, a five-rupee note changes hands five times, then the quantity of money in this case will be Rs. 25 and not Rs. 5.

(2) The use of *credit instruments as money.* If there is an increase (or decrease) in the use of credit instruments, such as cheques, book credits, etc., it should be regarded as an increase (or decrease) in the quantity of money in circulation. Similar is the case as regards the velocity of circulation of credit instruments.

(3) *Barter transactions.* It some exchanges are done without the use of money, they should either be excluded altogether or be regarded as an increase in the quantity of money (supply) or decrease in the quantity of transactions (or demand for money).

(4) The *volume of transactions* must remain constant. This means that the work to be done by money, or the transactions to be performed, must remain the same. Not only the amount of goods exchanged, but the number of times goods change hands (rapidity of circulation of goods) must also remain constant.

In a word, the value of money varies inversely with its quantity and directly with the volume of goods and services in existence.

3. Professor Irving Fisher's Equation of Exchange. Professor Irving Fisher has expressed the relationship between the quantity of money and its value in the form of a formula, which he calls the equation of exchange. This is :

$$P = \frac{MV + M'V'}{T}$$

Here P = Price level or $\frac{1}{P}$ = the value of money ;

T = Transactions to be performed by money ;

M = Metallic Money ; M' = Credit Money ;

V = Velocity of Money ; and V' = Velocity of Credit Money.

This formula equates the supply of money to the demand for it. Price-level multiplied by the transaction gives the total value of transactions which means demand for money (PT). This is equal to the supply of money which consists of cash and credit with their velocities of circulation ($MV = M'V'$).

Thus $PT = MV + M'V'$

$$P = \frac{MV + M'V'}{T}$$

Professor Fisher contends that in the short period T, V, V' remain constant. The proportion of M' to M also remains constant. Therefore P varies directly with M. In other words, I/P (value of money) varies inversely with M or quantity of money in circulation.

Why do "other things" (T, V, V′ and proportion of M′ to M) remain constant? Professor Fisher holds that:

Transactions or amount of work to be done by money remains constant in the short period, because population does not change, production per head of population does not change, percentage of consumption by producers does not change, percentage of exchange by barter does not change and the rapidity of circulation of goods does not change. Methods of production and habits of the people in this connection are practically fixed. Thus the demand for money remains constant.

(As regards the supply side, rapidity of circulation of money and credit depends upon custom and business habits of the people. The proportion of M′ to M depends upon the policy of the banks. These things do not change appreciably in the short period. Hence the value of money varies inversely with its quantity.)

4. Criticism of the Quantity Theory. The Quantity Theory has been widely criticised. With the qualification "other things remaining the same" it is a useless truism. It is an over-simplified theory. The real trouble is that 'other things' seldom remain the same. They change not only in the long period but also in a comparatively short period. Population, amount of business transacted per head of the population, velocity of circulation, policy as regards the proportion of credit to cash, all are subject to changes, and changes in them are constantly occurring.

Moreover, these factors are not independent variables as Fisher assumes. For instance, a change in M in itself may cause a change in V, and thus cause a change in P more in proportion to a change in M. After the first Great War, the German mark was depreciating fast and no one was willing to hold it. The rapidity of circulation of money (V) increased progressively and out of all proportion to the increase in the note-issue (M). Similarly, a change in M may cause and does cause frequently a change in T, and a change in P may lead to a change in M. An increase in the supply of money may raise prices, increase profits and stimulate production beyond the profitable level thus again depressing prices. Moreover higher price-level may necessitate the issue of more money to carry on transactions. Thus high price-level may be the cause rather than the effect of the increase in the quantity of money. Further, M refers to a point of time and V to a period of time, and it is wrong to multiply two different things, *e.g.*, MV.

The Quantity Theory of money is based on two assumptions whose universal validity is open to question: (*i*) Prices vary proportionately with total spending; and (*ii*) total spending varies proportionately with the total quantity of money in existence. "Only if one were to make the highly unrealistic assumption," says Samuelson, "of full employment and constant total output—only then would an increase in the total spending always send prices up proportionately .... An increase from depression levels in total spending causes a considerable increase in output and less than proportionate increase in prices; on the downswing, the drop in spending results in a drop in output and employment with less than a proportionate fall in prices."[1] Nor does the proportionality between total spending and total stock of money hold good, since the velocity of circulation of money is not even approximately constant. To quote Samuelson again : "Dimensionally speaking, spending bears the same relationship to the stock of money that a flow of water through a lake bears to the lake itself."

A fundamental weakness of the quantity theory of money lies in this that it supposes that an increase in the quantity of money is used in buying goods and services. That is why it sends up prices. But, instead, the additional money may go into bank deposits, lie idle in safes or invested in securities, or used in the purchase of life insurance policies. To this extent it will not affect prices.

Some writers object to the concept of the velocity of circulation. "The Quantity Theory," says Marshall, "does not explain the causes which govern rapidity of circulation." Instead of speaking of the increase or decrease in the velocity of circulation, some writers speak of a decrease of increase respectively in the demand for money, as we shall see later.

The Quantity Theory of Money is only an explanation of long-term phenomenon. It fails to explain the phenomenon of the short-run world, where so many factors are continuously operating to disturb the tendency to equilibrium and which, therefore, represents a period of transition. But since our real world is a sort of perpetual transition, the theory has only a limited value. That long-term equilibrium, which the Quantity Theory seeks to explain is never realised. "Equilibrium is like tomorrow—it never comes ; for as soon as the grey streaks of dawn appear, tomorrow means something else."

The simple and direct relationship between the quantity of money and the general price-level holds good only if the economy is in a state of equilibrium. As Keynes observes, "In equilibrium—*i.e.*, when the factors of production are fully employed, when the public is neither bullish nor bearish of securities and is maintaining in the form of saving-deposits neither more nor less than the 'normal' proportion of its total wealth, and when the volume of saving is equal both to the cost and to the nature of new investments—there is a unique relationship between the quantity of money and the price-levels of consumption-goods and of output as a whole, of such a character that if the quantity of money were double the price-levels would be double also"[2] Who can say that such an equilibrium can ever be attained ? Thus the Quantity Theory of Money in its earliest and crude form is useless and misleading.

Professor Hayek[3] thinks that the Quantity Theory has unduly usurped the central place in monetary theory and that the point of view from which it springs is a positive hindrance to further progress. "Not the least harmful effect of this particular theory is the present isolation of the theory of money from the main body of general economic theory."

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1. *Economics*, 1948, p. 292.
2. *A Treatise on Money*, 1950, vol. I, pp. 146-47.
3. *Prices and Production*, Lecture 1.

Lord Keynes's objection to the theory is that it does not treat the problem dynamically. "The fundamental problem of monetary theory is not merely to establish identities or statistical equations relating, *e.g.*, the turnover of monetary instruments to the turnover of things traded for money. The real task of such a theory is to treat the problem dynamically, analysing the different elements involved in such a manner as to exhibit the causal process by which the price-level is determined, and the method of transition from one position of equilibrium to another."[1] "The Quantity Theory," in the words of Whittaker, "is admirable as an elucidation of the mechanism involved in the price-level, but as an explanation of causation it has serious shortcomings."[2]

In its crude form the Quantity Theory is untenable. A few questions will bring out its unrealistic character. Can a business man raise the price of his product simply because the central bank has issued more notes? Is everybody prepared to spend the money that he has? The answer is obviously in the negative. Is it not possible that new money may facilitate further production and thus arrest a rise in prices? The theory takes no notice of the elasticity of supply of goods. When the supply is elastic, T may increase more than P. Fisher's equation does not pay any attention to the element of time. Creation of money may be instantaneous but velocity and volume of trade are spread over time

Taking into account the velocity of circulation and the volume of trade, an improved statement of the theory will be that "*the general level of prices varies directly with the quantity of money and its velocity of circulation and inversely with the volume of goods and services to be purchased with money.*" In this refined or modern version of the old and crude Quantity Theory, due notice has been taken of the three important factors affecting the general price-level, *viz.*, the quantity of money, its velocity and the volume of trade or transactions No economist now believes in any fixed and automatic relationship between the quantity of money and the general level of prices Thus the theory has changed, only the name remains. The modern economist has put new wine in the old bottle.

It is now widely recognised that the "value of money, in fact, is a consequence of the total incomes rather than of the quantity of money". The real cause of price fluctuations is the fluctuation in individual incomes. During depression money is in abundance but the incomes are low and hence prices are low.

But the Quantity Theory of Money is not entirely useless. As an economic theory it states an important tendency. Its utility lies in the fact that it tells us what will be the *likely* effect if there is inflation or under-expansion of bank credit or if trade activity (volume of trade) increases, provided we keep a careful watch on the other relevant factors. The monetary authorities act on this theory when they deliberately increase the quantity of money (inflate currency) or decrease (deflate) it in order to rise or lower the general price-level.

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[1] *Ibid.*, vol. I, p. 133.

[2] *Op cit.*, p. 660.

The theory is a useful aid in interpreting economic events during inflationary periods and marked price fluctuations in the past.

5. Supply and Demand Theory of money. The laws of supply and demand are applicable also to the determination of the value of money. We know that the value of money varies inversely with the general level of prices. But the price-level depends, on the one hand, on demand for money (*i.e.*, volume of goods being sold) and, on the other, on the supply of money (*i.e.*, quantity). We can say that " at any moment, the value of money, like the value of other commodities, is determined by the relation between the demand for money and its supply.'' The Quantity Theory fails to present adequately the forces acting behind supply and demand.

Supply of Money. In a modern community, the supply of money may consist of (*a*) metallic money, *i.e.*, gold or silver, (*b*) legal tender currency issued by the government or under government regulation, (*c*) various instruments of credit, *e.g.*, cheques, drafts, bills of exchange, etc.

The supply of each type depends upon various conditions : (*a*) The amount of metallic money depends on (*i*) improvement in mining methods ; (*ii*) discovery of new ore deposits ; or (*iii*) more gold coming from other non-monetary uses.

(*b*) The amount of legal tender currency and other subsidiary coins will depend upon (*i*) the nature of government regulations as regards coinage and keeping of metallic reserves against notes ; (*ii*) the monetary needs of the government ; and (*iii*) the volume of retail transactions.

(*c*) The supply of 'bank money' will depend upon (*i*) the volume of deposits, (*ii*) credit policy of banks, and (*iii*) the stage of economic development of the country.

We must also take into account the rapidity or velocity of circulation of money of all types. The supply of effective money also depends upon the extent of government borrowing of idle money, habit of hoarding, etc.

It is clear that in countries where full-bodied metallic coins are the only form of money, the supply of money cannot be increased as easily as in countries where token coins are used, or paper notes, backed only by a proportion of metal, circulate as money. Paper notes, when not legally convertible into metal and when not strictly regulated by law, can be issued according to the whims of the currency authority. Where bank money is the most common method of making payments, the supply of money can be increased almost to any extent. Usually, however, a certain proportion of cash (currency notes, etc.) is kept as reserve against deposits. But since this proportion is elastic, the supply can be increased and decreased within a wide range.

The banks can encourage borrowing by lowering their rates of interest, and discourage them by raising it, usually under the leadership of the central bank. They can also, especially the central bank, expand purchasing power by purchasing securities, and contract it by selling securities. But their ability to expand and contract this supply of money depends on the state of trade. During periods of depression, they may not be able to induce entrepreneurs to get advances, since investment is not profitable. Even if they purchase securities in the market, the money thus put into the hands of the people may not be invested. It may merely result in greater *holding* of money. Thus increased supply may be neutralised by increased demand. But what is demand for money ?

Demand for Money. Let us be clear as to what we mean by demand for money. By 'demand for money', we do not mean demand for income or wealth. It means demand for cash balances or liquid resources. Again, money is wanted because it has purchasing power. Hence demand for money is really demand for units of purchasing power. Fisher's formula makes the demand for money (PT) equal to the total value of transactions carried on during a given period. This concept of demand is neither definite nor scientific. Professor Cannan in this connection says :

> " That belief seems to me to be exactly equal to a belief that the demand for houses comes not from the people who want to live in houses but from people who buy houses and sell them again forthwith. The effective demand for houses evidently comes from those who want to *hold* houses, even the speculator wants to hold for a time. Mere 'activity in the house market '—a little more changing ownership than usual—only involves an increase in demand in the same sense as it involves an equal increase of supply which cancels it. Whatever may be said about the actual use of the terms it is clear that the demand which is important as affecting the value of the house is the demand for occupation."

The demand for money is thus the demand to *hold* money rather than *consume* it. It is the opposite of velocity of circulation of money. Money may be held by private individuals, business organizations, or public institutions of various kinds. Why do people want to hold money ? The reasons are various : Ordinary consumers hold money in order to meet their day-to-day requirements for purchasing consumers' goods. Entrepreneurs may hold it for their current expenditure on wages and other sundry expenses. Public bodies also hold money for a smiliar reason. People hold money to meet emergencies or unforeseen expenses. Sometimes money is held due to the lack of a more profitable alternative. The other alternatives to holding money are to spend it on consumers' goods or to invest it. Investment may be in goods, securities or merely a balance in the banks.

People do not and cannot spend all their income as soon as they get it. The expenditure has to be spaced according to requirements. As regards investment, it is not always an attractive alternative, especially during short periods, and it may be troublesome or risky. Stocks of goods require looking after and can deteriorate or depreciate in value. Securities also may fall in value. The bank interest on savings may not be high enough to attract funds. Similarly, pro-

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1. Quoted by Stevenson and Branton in *Economics of Banking, Trade and Finance*, p. 15.

fits may be either low or may be expected to fall. Under such conditions, more money will be held than invested.

Thus people tend to hold more money during a depression than during a period of brisk trade. The demand for money during a depression is, therefore, high and consequently its value is high. In other words, general prices during a depression are low. On the other hand, when higher profits are expected investments increase and the demand for money falls (*i.e.*, less money is held by the people). Hence the value of money falls or the general level of prices rises. The amount of money that business men will hold will also depend on the extent of book credit that they allow one another. This tendency of the people to hold money has been called by the late Lord Keynes " liquidity preference ". Thus there can be an increase or decrease in " liquidity preference ", which means that people prefer to hold more or less of their incomes in the form of ready purchasing power.

The demand for money in this sense depends upon various circumstances. An increase in population will necessitate larger amounts of money to be held. Increase in the volume of production, increase in taxation, increase in the number of firms through the process of disintegration of existing firms, breakdown of subsistence economy, etc., are also some of the factors which will cause an increase in the demand for money. And methods by which currency can be economised (*e.g.*, barter, amalgamation of business, etc.) will reduce the demand for money. Also, people will tend to hold less money if the timings for making payments and receiving payments synchronise, if they can acquire assets which they can readily convert into cash, *e.g.*, current account or Government securities. Those who have high credit in the market need not maintain a large cash balance. More equal distribution of wealth will tend to increase the demand for money, because poorer sections of the community will be able to hold more money than before. Moreover, psychological causes also may affect the demand for money. As we have already said, expectation of a fall in prices (rise in the value of money) will cause people to hold money rather than spend it. Conversely, if prices are expected to rise people will tend to hold less money, *i.e.*, either it will be spent or invested.

The idea of "velocity of circulation" in the Quantity Theory was criticized by Professor Cannan and others. The concept is vague. Expressed in terms of demand for money the same idea becomes more definite. For instance, during periods of rising prices or depreciating currency, the velocity of circulation of money is said to have increased. We can also say that the demand for money has decreased. The moment a person gets some money, he tries to get rid of it by spending it. The opposite happens when prices are falling. During a depression, instead of saying that the velocity of circulation of money is low, he may say that the demand for money is high.

We may conclude then that the value of money, like the value of every other thing, is determined by the interaction of the forces of supply and demand. It is the supply, together with the demand, that determines the value of money or the general price-level. Given the supply, an increase in demand raises the value of money or lowers general prices, as happens during periods of depression. Conversely, given the demand for money an increase in its supply lowers the value of money or raises the general level of prices as happens during periods of brisk trade. The price-level tends to be maintained at that point where supply and demand are in equilibrium.

6.[1] **The Cambridge Monetary Equation.** There are two main lines of approach to the problem of relationship between the quantity of money and its value (or the price-level). This has given rise to two types of quantity theories. One is the Quantity Theory of Money proper, called the transactions type theory which we have discussed in section 2 and which is represented by Fisher's Equation. This approach has been more popular in the U.S.A. The other approach, known as the cash-balance type, which has been more popular in Europe, especially England, is represented by the Cambridge Equation.

The latter is an improvement on the former Quantity Equation in the sense that it is based on the National Income approach and takes into account the concept of liquidity, both of which form part of Keynesian Economics.

As mentioned above, the Cambridge Equation represents what has been called the cash-balance approach to the value of money.[2] It simply says that the value of money depends on demand for cash balance and the supply thereof *at any given time*. We have discussed in the preceding sections the determinants of both demand and supply of money. Here we want to draw the attention of the student to one point on the demand side. The demand for money does not merely depend on the physical quantity of resources or of the goods and services which are sought to be exchanged, but it largely depends on the *period of time* which the transactions are intended to cover. Take the case of a consumer of wheat. Is it necessary for him to purchase his *whole* year's requirement of wheat at once or, what comes to the same thing, keep sufficient liquid cash to buy the whole year's requirement ? No it is unnecessary. Few consumers will do that unless they happen to be foolish. A consumer may decide to buy wheat from month to month. It will then be necessary for him to keep cash equal to 1/12 of his total requirement of wheat for the year. Similarly, he will keep liquid funds just enough to enable him to purchase his requirements of other goods and services *for a certain period only* and not for the whole year.

If the membrs of a community are in the habit of keeping cash to cover their purchases over a longer period, obviously their demand for cash will be greater. Only a fraction of the whole income is kept in cash, the rest is invested. The amount of cash held should be neither too much, because to keep cash locked up idly means a loss besides being a danger, although a large cash balance makes business smooth and easy. Nor should the amount of cash held be too small, because it may be risky from the business point of view. As Marshall observes, "A man fixes the appropriate fraction (of his income) after balancing one against another the advantages of a further ready command and the disadvantages of putting more of his resources into a form in which they yield him no direct income or other benefit." An individual has thus to keep only a fraction of his income in titles to legal tender (*i.e.*, liquid cash) to carry on his business smoothly and to guard against emergencies. Let this fraction be denoted by *k*.

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[1] This section is meant for Honours and M.A. Students.

[2] Marshall, A.—*Money, Credit and Commerce*, I, iv, 3.
Robertson, D.M.—*Money*, 1932, Ch. II and Appendix A.

The equation is usually put in the form

$$M = kpR,$$

where M is the quantity of money and is the same as M of Fisher's Equation of Exchange. R is the real national income *i.e.*, it is the sum total of goods and services finally brought to the market and sold for money, *e.g.*, cotton is not a part of R but a suit of clothes made by a tailor is a part of R. Similarly wheat is not included in R but bread is.

p is the average price-level of the *real* national income. That is, it is the average of price of clothes, food, shelter and other goods and services consumed by the public.

Thus pR is the monetary national income.

Now a proportion of the monetary national income is held by the community in cash. This proportion is *k* and represents the desire of the public to have liquid resources. This is called the liquidity factor for buying it. If all money circulated only once, then the amount of money required would be the same as the monetary national income. If money circulated twice in a year, then obviously half pR will be required to purchase the national product, *i.e.*, to create the monetary national income which is shown as pR above. The number of times money circulates for buying the national product in a year is V_1, *i.e.*, Income velocity of circulation of money. k is the proportion of the monetary national income which the community desires to hold in cash. pR then is the demand for money for purchasing the national product. This must be equal to the money supply.

$$M \times \text{velocity of circulation of money} = M \times V_1$$

$$\therefore \qquad M = kpR \text{ where } K = \frac{1}{V_1}$$

We have seen that in the Fisher's Equation of Exchange in its simplest form

$$M = \frac{PT}{V_T} = \frac{1}{V_T} \times PT$$

By Cambridge Equation

$$M = kpR$$

$$\text{Now as } k = \frac{I}{V_1}$$

$$\therefore \qquad M = \frac{I}{V_1} pR.$$

The differences between the two equations are as follows :—

(*i*) T in the Fisher equation is the sum total of all transactions where R is only the final product which comes to the market. For example, Fisher will include in T the transactions of production and sale of cotton, sale of yarn, sale of cloth and finally sale of tailored clothes, whereas R includes only the goods finally brought to the market, *e.g.*, tailored clothes.

(*ii*) Similarly P in the first equation is the average of the price-level of each good and service at each stage of production and includes the average price-level of all transactions. p in the Cambridge Equation is the price-level of only the goods finally brought to the market. They may tend to move up and down in the same direction, but are not the same.

(*iii*) The meaning of V, *i.e.*, velocity of circulation, also differs between them. In the Fisher Equation it takes the form V_T, *i.e.*, Transactions Velocity of circulation. It represents the number of times a units of money circulates for performing all the transactions taking place in the economy in a year. V_1, on the other hand, is only Income Velocity of circulation and represents the number of times a unit of money circulates for buying the final national product.

Thus we say that the Cambridge Equation lays stress on the national income, its price-level and the liquidity of the public. Keynes uses the concept of national income in the modern Keynesian analysis and it is with the fluctuations of the price-level of final goods and output with which the modern trade cycle economists and governments are concerned. The concept of liquidity, slightly modified, is used by Keynes for his theory of rate of interest and investment, as a determinant of total production.

But, for Keynes, there are other factors more important on which total national income depends. These are the profitability of investment and thriftiness. The Cambridge Equation does not take note of these and is, therefore, not used for analysis these days.

7. Elasticity of Demand for Money. When we say that the value of money depends exclusively on its quantity (*i.e.*, doubling of money halves its value and halving it doubles its value), it is based on an important assumption that the elasticity of demand for money is unity.

Demand for money largely depends on the extent of barter and credit and, above all, on the volume of transactions. It is assumed that over a period there is little change in the conditions of demand for money (*i.e.*, the demand curve remains unchanged). Demand for money remaining the same its value will, therefore, entirely depend on its supply (or quantity.) Any change in the quantity of money will bring about an *exactly proportionate* change in the value of money. If the quantity of money increases 100%, prices rise 100% and if the quantity of money decreases 100%, prices will come down *exactly* 100%. This does not happen in the case of a commodity. If the supply of wheat, for instance, is increased 100%, its value will not necessarily fall exactly 100% Why ?

It is supposed that money is just a ticket serving as a medium of exchange and it has not use apart from it. It cannot be consumed like other goods. When goods are in abundance and cheap, more of them will be consumed. But money cannot be consumed like that. In case, therefore, its quantity is increased, it must be exchanged for goods in existence. Suppose there are 100 articles in a community, and there are 100 coins ; 100 coins will exchange for 100 articles, and the price will be one coin per article. Now if the quantity of money is doubled then 200 coins will exchange for 100 articles. The purchasing power of 200 coins and 100 coins remains the same, *i.e.*, in both cases 100 articles are purchased. It is said, therefore, that the change in the quantity of money is immaterial. This is expressed by saying that elasticity of demand for money is unity. "This means that an increase in the value of money will cause an *exactly proportionate* decrease in the demand for it, and conversely that a decrease in the value of money will bring about an *exactly proportionate* increase in the demand for money to hold."[1]

But is elasticity of demand for money really unity ? No.

In the world of reality, we do not find that *every* change in the quantity of money is followed by an *exactly proportionate* change in the price-level. In Germany, when inflation was going on after World War I, prices rose much more than were justified by the increase in the circulating media. Inflation necessitates further inflation. Demand for money also goes on increasing side by side. People lose confidence in their currency much faster at every stage of inflation. Prices are expected to rise every day. People start charging 'tomorrow's' prices. Hence when quantity of money increases, its value does not fall proportionately, but it falls much more. In the same manner, when there is depression, prices go on falling even though there is no change in the quantity of money. During the world-wide depression of early thirties, many countries increased the supply of currency to raise the prices, but there was little response.

The fact is that price phenomenon is a complicated one. The quantity of money is only one of the many factors affecting it. It is, therefore, idle to expect that *every* change in quantity of money will be reflected by an *exactly proportionate* change in the price-level. We may, therefore, conclude that elasticity of demand for money is *not* unity.

An Anomaly. During periods of brisk trade, the volume of transactions very much increases, which means an increase in the demand for money. Hence value of money should increase and the prices should fall. Conversely, when trade is stagnant, there is little demand for money, its value should fall, *i. e.*, prices rise. But the case is quite the opposite. What is the explanation ?

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[1] Coulborn, W. A.—*A Discussion of Money*, 1950, p.89.

The explanation lies in the fact that the volume of credit readily responds to the general business condition. In times of business prosperity, there is a greater readiness to grant and use credit. This is due to the general optimism prevailing at the time. Hence expansion of credit outstrips the volume of trade. Expansion of credit means increase in general purchasing power and the rising of prices. During depression, credit is shy and it contracts much more than is justified by the decrease in volume of trade. The prices come down.

That the elasticity of demand for money is unity is a static idea. In the dynamic world of ours, the quantity of money does not double or treble overnight. The changes are very gradual, almost imperceptible. Various factors are at work. Hence we cannot expect proportionality in the effects of change in the quantity of money.

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CHAPTER XXXIII

MONEY AND PRICES

In this chapter, we shall discuss the various aspects of price, fluctuations. Let us first familiarise ourselves with terms like 'inflation', 'deflation' etc.

1. Inflation, Deflation. By 'inflation' is usually meant an excessive rise in the general level of prices, usually on account of an increase in the supply of money, unaccompanied by a corresponding increase in the demand for it. When prices rise due to increased gold supply, we speak of *gold inflation* ; when it is due to an increase in currency notes, it is *currency inflation* ; and when it is caused by an over-experience of creidt, the term *credit inflation* is used. Mere inflation implies an excessive rise in general prices due to some, any, or all of these causes. Inflation can also result if the demand for money falls off, even though the supply remains the same. But such occasions are rare. Several European countries, after World War I, furnished instances of the evils of malignant and galloping hyper-inflation. China during Chiang kai-Shek's regime also passed through a similar phase where a pair of shoes cost some millions of dollars. In Germany, during World War I, there was so much inflation that the German mark became practically valueless. It was estimated that if the entire German national debt was repaid to one man, he could not buy a lunch with the amount ; he could perhaps buy a packet of cigarettes.

How excessive inflation turns the society upside down can be illustrated by the instance of two brothers in Germany who inherited a huge fortune from their father. One of them kept his portion in the bank and the other exhausted his fortune in drink and filled a cellar with empty bottles. When inflation occurred, the thrifty brother had the disconcerting experience of finding that the purchasing power of his millions in the bank was reduced to mere nothing. whereas his thriftless brother became a millionaire by the sale of empty bottles.

The effects of inflation on the middle classes were simply disastrous. A German Southerner said during the confederate inflation, "We used to go to the stores with money in our pockets and came back with food in our baskets. Now we go with money in baskets and return with food in our pockets."[1] Inflation creates chaotic conditions. Production is disorganised. Everything is scarce except money. This is what the 'mad dance of the dollar' leads to.

Among the means of combating inflation we may mention (*i*) contraction of currency by the central bank by manipulating the bank rate or through the open market operations, (*ii*) control on bank credit, (*iii*) increasing taxation, (*iv*) national savings drive, (*v*) rigid economy in public expenditure, (*vi*) price control, and (*vii*) increasing production.

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[1] **Samuelson, P. A.—*Economics*, 1948, p. 283.**

Deflation is the opposite of inflation. It means excessive fall in prices due to contraction of currency or due to greater demand for currency. This is regarded as even more disastrous than inflation.

Reflation is a moderate degree of controlled inflation. When prices have come down abnormally, so that economic activity ceases to be profitable, the currency authority may adopt measures to put more money into circulation with a view to raising prices and encouraging economic enterprise. This is one of the remedies to meet depression suggested by those who think that the money factor is the primary cause of such depressions. (More of the subject is discussed in the Chapter on Trade Cycles.)

Disinflation refers to a process of bringing down prices, when they have risen abnormally due to inflation. This is done by contracting currency. The terms reflation and disinflation are free from odious flavour.

It should be noted that high or low prices as such are immaterial. If *all* prices double or are halved overnight, it makes no material change in the economic position of the people concerned. But this never happens. Actually different prices change in different degrees. Some prices may not change at all. Some groups of prices may even have gone down. A general rise of prices merely refers to a rise in the average level of prices.

Changes in prices of individual commodities are usually the result of changes in their respective demands and supplies. But when the prices of most commodities begin to go up, and do so relatively quickly, the cause is usually on the side of money, *i.e.*, an increase in the supply of money. Conversely, when most prices show a quick fall, the reason is usually an increase in the demand for money in the sense explained earlier.

2. Consequences of Changing Prices. In his *Tract on Monetary Reform*, Keynes divides the community into three classes : the investing class, the business class, and the earning class. We may study how the changes in the value of money affect each. A rise in the general level of prices hits hard the investing class or the fixed-incomist class. They can purchase with their fixed income fewer goods and services than before. But the business man or the entrepreneur class gains, because while the sale prices are rising, their cost of production usually lags behind. Wages and salaries, for instance, are fixed by agreements which are not immediately revised, and rent and interest charges also remain the same. The producers, therefore, gain. The earning class stands to lose when prices rise, since their wages and salaries do not move up correspondingly. Their real wages go down. But as a period of rising prices is a period of trade and industrial activity, the wage-earners gain in continuity of employment.

We may also notice the effect on debtors and creditors. When prices rise, the debtors gain. The debts are paid by the sale of commodities or services. In case the debtor is a producer, he will have to part with less quantity of his output to pay a given amount of the debt. In case he is a worker, a smaller amount of work will be enough to discharge the debt.

When prices rise, the general body of consumers suffer unless they belong to the category of business men, speculators or black-marketeers. The scale of consumption has to be cut down when everything becomes dear.

The downward movement of prices produces opposite results. The *rentier*, the investing class, gains and so does the earning class, since their comparatively fixed incomes purchase more in terms of goods and services. But if there is a continued depression, the worker may lose on account of general employment. Only those lucky few gain who are able to keep their employment. The business class, on the other hand, suffers. In the first place, falling prices reduce their gross incomes from business undertakings. Secondly, the various elements of cost, like fixed charges and wages, do not come down at the same time. Their business profits are thus seriously cut down.

The debtors lose when the prices fall because they have to part with larger quantities of goods and services in order to repay a given debt. In the early thirties, the burden of land revenue on the Indian peasant was increased manifold, when the prices of agricultural commodities fell incredibly low. The creditors, on the other hand, gain because the money that they get back buys much more than it did when they lent it.

The general body of consumers gain from low prices. They are able to improve their standard of living.

On the whole, we might say that, broadly speaking, all debtors gain from rising prices and lose from falling prices, since their fixed monetary obligations mean more in terms of goods and services when prices fall and less when prices rise. The creditors, on the other hand, gain when prices fall and lose when they rise.

Taking agriculture and industry, the variations in prices do not affect each of them to the same degree. As the experience of the Great Depression showed, prices of agricultural products tend to decline more quickly and recover more slowly than those of industrial products. This is due to difference in conditions of demand and supply. Agricultural operations have a slow rate of turnover since crops must take time to grow and become available in the market. Moreover, control over supply is difficult to exercise because of the scattered nature of agricultural production units. The demand for agricultural goods also is less elastic than for manufactured goods. In the case of industries, production can be controlled and output regulated much more easily.

We might also notice the effect of changes in the value of money on the State or, to be more precise, on State finances. The State may be put in the category of fixed-incomists, and as such, it gains when the value of money rises (*i.e.*, when prices fall) and loses when the value of money falls (and prices rise). But with the State, things are not so simple as that. When the value of money is falling (*i.e.*, prices are rising) *gradually*, the State will gain because it will lend buoyancy to its revenues. Even if the rates of taxation remain the same, their yield will be higher. If, on the other hand, the value of money is rising (*i.e.*, prices are falling) *gently*, the revenues may remain steady. But if the gently falling prices develop into a depression, the national income, and hence the State revenues, will shrink. Any attempt to balance the budget in these circumstances will simply accentuate the depression. Deficit financing will, therefore, be more appropriate.

In case the value of money is falling headlong, as in a runaway inflation due to the State pumping in more money, the very object of the State in creating money will be defeated. Prices having risen by the time the State revenues pour in, their purchasing power will have gone down. More money will have to be created to enable the State to purchase the same amount of goods and services. Thus inflation breeds inflation and the government is caught in a vicious circle. But it will prove a blessing in disguise in one respect. The State will be able to clear a huge national debt by this means and return to an unencumbered economy. This course will be more expedient than honourable. It will practically amount to cancellation or repudiation of the nationl debt.

Too much fluctuation in either direction is bad for economic enterprise, since it creates uncertainties regarding future expectations. Maintenance of comparative stability of prices is, therefore, necessary for orderly economic development. A watch on the price-level index is, therefore, essential.

3. **Index Numbers.** In order to measure the changes in the value of money, an index number of prices is constructed. Below are given the various steps in the construction of such an index number :

(*i*) *The choice of the base year.* The first step is to choose a year to serve as the base year, *i.e.*, the year with reference to which the price changes in other years are expressed as percentages. Care must be exercised in its selection. It should be an average year, neither too prosperous nor too depressed from the point of view of economic conditions in general. Sometimes an average (of prices) of a number of years is taken to serve as the base.

(*ii*) *Selection of commodities.* The second step is to select commodities the prices of which have to be taken to represent the general price-level. The commodities should be really representative and should be sufficiently large in number. The selection also depends on the object with which the index number is prepared.

(*iii*) Price lists are then taken for each commodity. It is better to have an average of wholesale prices of the same commodity from a number of representative markets. These prices are taken for the base year (or years) and also for the subsequent years, the index number for which we want to construct.

(*iv*) The next step is to *represent the price of each commodity for the base year as* 100, *and the price of the same commodity for the subsequent year as a percentage of the price for the base year.* For instance, if the price of wheat in the base year is Rs. 4 per maund and is called 100, a price of Rs. 8 in the subsequent years should be called 200, and so on in the case of all the commodities and all the years.

(*v*) The final step is *to strike the average of the number thus obtained* with reference to each year. The average for the base year will naturally come to 100. The other averages will be higher or lower than 100 according as the general price-level has risen or fallen.

The following statement illustrates how index numbers are constructed :

Articles	*Prices in base year* 1939 (Rs. per md.)	*Indices in base year* 1939	*Prices in* 1945 (Rs. per md.)	*Indices for* 1945
Wheat	4 0 0	100	10 0 0	250
Rice	3 8 0	100	14 0 0	400
Cotton	15 0 0	100	22 8 0	150
Sugar	8 0 0	100	16 0 0	200
Ghee	60 0 0	100	150 0 0	250
Average		100		1250÷5=250

According to this table, there was a rise of 150 per cent in general prices in 1945 as compared with 1939. This means that in 1945, the value of money in India (on the basis of the above figures) was 2/5 of what it was in 1939, a fall of 60 per cent.

Weighted Index Numbers. The type of Index number constructed above is called an unweighted index number. Here every commodity is given the same importance. But actually to a consumer, a small rise in the price of a particular commodity may mean a greater disadvantage than a big rise in another commodity which is not so important in his household expenditure. This fact is specially to be taken into account when we are constructing what is called the 'cost of living index number,' *i.e.*, the one for measuring changes in the cost of living of particular class of people.

Suppose the above articles represent goods consumed by a particular class of people, and we want to know how the war affected their cost of living. All these articles are not of the same importance to these consumers. To show their relative importance, we can assign "weight" to each of the commodity by multiplying its index number by a certain figure indicating the degree of its importance. Such a figure is usually based on the proportion of money spent on particular commodities in typical family budgets.

The following table illustrates how a weighted index number is constructed. The same figures are taken as in the previous illustration :

Articles	*Price in base year* 1939 Rs. per md.	*Indices in* 1939	*Price in* 1945 Rs. per md.	*Indices in* 1945
Wheat	4 0 0	100×3=300	10 0 0	250×3=750
Rice	3 8 0	100×1=100	14 0 0	400×1=400
Cotton	15 0 0	100×1=100	22 8 0	150×1=150
Sugar	8 0 0	100×2=200	16 0 0	200×2=400
Ghee	60 0 0	100×1=100	150 0 0	250×1=250
Total		800		1950
Average		100		243·75

Thus we have given three times importance to wheat as compared with rice and twice to sugar as compared with ghee, etc.

The cost of living on this basis has not risen as much as indicated by the unweighted index number if that was regarded as a cost of living index number. These figures, however, are only by way of illustration. Actually the same index could not be employed to measure changes in the general level of prices and changes in the cost of living. Moreover, the commodities taken to measure changes in the cost of living of different classes will not be all the same. It will depend upon what commodities figure in their scheme of consumption.

We have only chosen a few commodities. Actually a large number of commodities is chosen. For instance, the oldest series of index numbers in India is the one constructed by the Commercial Intelligence Department of the Government of India. It includes 28 exported and 11 imported articles. The series is unweighted and takes 1873 as the base year. Two more series are for Bombay (40 articles) and Calcutta (72 articles).

Weighting can be indirectly introduced by taking prices of more than one variety of a commodity, *e.g.*, 3 varieties of wheat, 2 of cotton, 3 of tea, and so on.

About 20 different cost of living index numbers are now published in India from various important urban centres.

4. Uses and Limitations of Index Numbers. The method of index numbers is used not only for measuring changes in the price-level. We can measure any quantitative change in addition to changes in the value of money and cost of living. There may be index numbers of wages, imports, exports, industrial activity, employment, change in areas under cultivation, change in population, etc. These measurements indicate social and economic trends and help in framing policies with respect to them.

For instance, an index number of cost of living can guide us in the adjustment of wages to changing prices. Index numbers of wholesale prices can guide the currency authority in stabilizing price-levels and exchanges.

We can compare, with the help of index numbers, economic conditions of a class of people at two different periods.

Index numbers can be used as a basis for an equitable discharge of contracts, *i.e.*, borrowing and lending. When prices rise the creditor is a loser, for the same amount returned to him has less purchasing power. It would be more just to ensure that the creditor gets back the same purchasing power. If that is so, then the amount of the principal should be increased in proportion to the increase in prices. Similarly, when the prices fall, the debtor should be asked to pay correspondingly less, otherwise the burden of the debt in terms of commodities and services will be increased in proportion to the fall in prices.

Limitations. Index numbers are thus very useful, nay their preparation is essential for modern governments, otherwise all their economic policies will be a leap in the dark. But it is necessary to recognise that the index numbers suffer from certain limitations. *In the first place,* they are just approximations. They cannot be taken as infallible guides. Their data are open to question and they lend to different interpretations. *Secondly,* international comparisons are difficult, if not impossible, on account of the different bases, different sets of commodities or difference in their quality or quantity.

Thirdly, comparisons between different times are also not easy. Over long periods, some popular commodities are replaced by others. Entirely new commodities come to figure in consumption, or the commodity may be vastly different from what it used to be. Think of a modern railway engine and one of the early ones. Ford car 1959 is a different commodity from the 1939 Ford.

Fourthy, index numbers only measure changes in the *sectional price-levels.* An index, therefore, prepared for a particular purpose may not be useful for another. An index number that helps us to study the economic conditions of mill-hands or railway coolies will be useless for a study of the conditions of college professors. An entirely different set of commodities will have to be selected. Different people use different things and hold different assets. Therefore different classes of people are affected differently by a given change in the price-level. Hence the same index number cannot throw light on the effects of a price change on all sections of society.

Finally, one set of weights may yield quite a different result from another, and weighting is all arbitrary.

As Coulborn observes, " No general price-level is in fact compiled in this way because the practical difficulties of collecting the various prices and assessing weights strictly appropriate to the base year, and approximately relevant to the subsequent ones, prove to be difficulties which are insuperable in practice."[1]

5. **Price Stabilization.** Sudden changes in the value of money (or general price-level), apart from their social and political consequences, cause uncertainty and dislocation in economic activity. The necessity for price stabilization is, therefore, more and more realised. Price stabilization does not imply a rigid system of price control. This is neither desirable nor feasible. Short-period fluctuations in prices cannot be entirely eliminated. Moreover, changes in prices over very long periods also are not so harmful. But fluctuations in prices over, say 10 to 15 years, should be reduced to the minimum. These are represented by the periodic booms and depressions which we shall discuss in a separate chapter.[2]

Price stabilization may be attempted in two ways. (*i*) Stabilization of the prices of important individual commodities by influencing the factors affecting their supply and demand respectively.

(*ii*) The second method is to tackle the problem of general level of prices by adjusting the supply of money to its demand. In this connection, various ways have been suggested. Some advocate a

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1. *A Discussion of Money,* 1950, p. 79
2. Chapter XLIII.

gold standard system, while others suggest some sort of a managed system of paper currency.

In the modern world, no country stands isolated. Price-levels of various countries are interconnected. Price stabilization, therefore, has more and more assumed the character of an international rather than a national problem.

Price Stabilization not always desirable. It may, however, be pointed out that stability of price-level, as an objective, is not always desirable. Price fluctuations have a definite function to perform in an economic system based on the free play of competition. It is through this mechanism that the community's resources are diverted to those channels in which they give maximum returns. Prices reflect that relative demands of the community. Price changes give warnings that certain maladjustments exist and these enable steps to be taken to correct them.

Moreover, as Gregory and Hayek have pointed out, stable prices may bring current dislocations and disharmonies in the economic structure as the experience of the U.S.A. during 1923 to 1929 showed. Besides, even if the average price-level is kept stable, changes in individual prices of important commodities may bring about serious dislocation in economic life.

Finally, even from the point of view of social justice, stable prices are not always the best. They might ensure constant quantities of goods in settlement of debts and credits. But the same quantity of goods may mean less sacrifice in times of plentiful harvest and increased industrial output due to technical inventions. In such times, justice demands that prices should be allowed to fall. The same holds true under opposite circumstances.

Similar difficulties are encountered when the objective is the conservation of gold reserves, stabilization of exchange or avoidance of business cycles.

6. Difficulties of Price Control. We have all become familiar with price control and its difficulties. It is usually assumed that the central bank of a country can control price-level by controlling credit. This belief is based on certain assumptions which are not always valid. These assumptions are : (*i*) That it is possible to construct accurate indices of prices and to use them as guides. We have already discussed the various limitations of index numbers. Such indices must cover a complete representative range of commodities, should be correctly weighted and be promptly available. This is not usually possible.

(*ii*) It is further assumed that there is a close and consistent relation between quantity of money and price-level. While discussing the quantity theory of money, we observed that such relationship does not exist in actual fact. In a credit economy, this is all the more true. First, as we shall see, bank credit is not the only form of credit. Secondly, credit is not used for purchasing commodities only. It may be used for buying and selling of real estate (*e.g.*, land, houses, etc.), securities and services. Thus an increase in the volume of bank credit may be accompanied by a fall in the level of commodity prices, owing to a rise in the prices of securities and real estate. Conversely, a decrease in the volume of credit may merely depress the prices of securities and real estate while leaving commodity prices unaffected or even raising them. In Poland, for instance, according to Lewinski, the quantity of money in circulation halved between 1913 and 1925 while the wholesale price index rose by 36%. Again in the U.S.A., during 1923-29, bank credit expanded enormously while commodity prices showed only minor changes. Prices of stock exchange securities and real estate, however, rose tremendously.

Further, velocity of circulation may move in the opposite direction and counter balance the effect of credit expansion or contraction carried out by the bank. The central bank has little control over such velocity. Then there are non-monetary factors which exert influence on commodity prices, *e.g.*, climate, political and industrial upheavals, changes in the technique of production, changes in fashions, population, changes in people's moods, etc. All these may nullify the bank's action.

The working of price controls, during the Second World War and after, has revealed the weak spots of this policy. During a war, there is an unwelcome and persistent tendency for the prices to rise, and, lest serious consequences should follow, the system of price control is instituted to maintain a reasonable level. High prices hit the poor sections the hardest and deprive them of the necessaries of life. The morale of the masses has to be kept, otherwise the home front may crack. Prices are also controlled to forestall the government servants' demand for high salaries. Also, during a war there is a serious imbalance between supply and demand. Besides civilian demand, there is new and additional demand for goods for war purposes. Supply, on the other hand, contracts since the resources have to be diverted to the production of war materials, and imports fall off. Inflation and increase in velocity of money push up prices and widen the gap between the rich and the poor. It is the duty of the government to control prices to prevent or minimise this social iniquity.

Price control measures[1] were accordingly adopted in all belligerent countries and were continued even after the end of the war. At first the problem was tackled in a piece-meal fashion and prices of only selected articles were controlled. As the governments acquired more experience, price control was made stringent and comprehensive. Laws were also passed against hoarding and profiteering. Ceiling was put on the prices of most commodities. In some cases, the new prices were linked with pre-war prices by allowing a 1% increase.

These measures did not at first meet with success. As soon as the price of a commodity was controlled, it disappeared into the black market. Among the causes responsible for the failure of price control may be mentioned : (1) lack of promptness in tackling the price situation ; (2) lack of experience on the part of the authorities ; (3) lack of integrity in the government staff ; (4) lack of co-operation from the people ; (5) lack of up-to-date and correct statistics ; and (6) unplanned and unco-ordinated nature of price control measures.

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[1] For a discussion of State regulation of competitive prices *see* Pigou, A.C.—*Economics of Welfare*, Part II, Ch. XII.

Different prices were fixed in different districts ; sometimes the same price was fixed in different districts regardless of the cost of transport. Sometimes only retail prices were fixed leaving the wholesaler to charge exorbitant rates. There was control over price without control over supply. There was selective control rather than overall blanket control with the result that the prices of uncontrolled commodities shot up making it difficult to enforce control over the controlled commodities. It was not realised that prices of most commodities were interlinked. The control laws were so general that it was easy to pass them and difficult to enforce them.

The crux of the situation lies in the character of the people. Price controls were fairly successful in countries where public morality was high and people were honest and public spirited, and they failed where these qualities were lacking.

7. **Function of Price-Mechanism.** We have studied above how far price stabilization is desirable and we hinted that price-mechanism performs a definite function in an economic system based on free competition. Let us study a little more about the functioning of the price-mechanism.

The pricemechanism functions in such a manner that the adjustments in the economic system take place almost automatically without any direction or dictation from a central authority. Price is the regulator both of production and consumption. The consumers are able to convey their preferences through the prices they are willing to offer. Similarly, the producers are able to indicate the scarcity or abundance of a commodity by means of the price they are willing to accept. If price rises, it checks demand and stimulates supply, and *vice versa*. If there is a greater demand for a commodity than the supply thereof, then the adjustment between the two will be brought about through a rise in price. Conversely, if the supply is greater than the demand, the price will fall and bring about an equilibrium between the two.

The same type of dovetailing is effected in the sphere of distribution, where we are concerned with the remuneration of services of the agents of production. Rent, wages, interest and profits are the prices paid for the factors of production. If, for instance, there is a large supply of labour, wages will fall and induce the employers to employ more and absorb the extra supply. If, on the other hand, the supply of labour has been curtailed by war or epidemics, the wages will rise and give a warning signal to the employers of this shortage.

The price obtained either for a commodity or a service constitutes an income which, through its purchasing power, determines the extent and the direction of economic activity. There seems to be every justification, therefore, for the present economic system to be designated as a "government by price."

The price-mechanism is supposed to harmonize the interests of both the consumers and the producers. In Benham's words. "It tends to harmonize the desire of entrepreneurs for profits and the desire of consumers to satisfy their wants as fully as possible from the factors of production available." This harmony, however, is n ot always realized in actual practice. We may find that either the consumers are being exploited or the entrepreneurs are suffering a eoss. While the consumers enjoy the benefits of cheap production, thely are sometimes deliberately defrauded, or they are at the mercy of the monopolist who does not hesitate to exploit them. On the other hand, the joint-stock company may suffer because of the inefficiency of the directors or because the directors are enriching themselves at the expense of the company. Thus we generally find divergence rather than harmony, between the interest of the producers and the consumers, for the price-mechanism does not often work smoothly and freely.

On the whole, it may be said that the working of the capitalistic system is out of the question without price-mechanism. It is price-mechanism which brings about the necessary adjustments between the various parts of the economic system. It is really difficult to think how the economic system could function in the absence of price-mechanism. It is not intended to convey that the economic system functions justly or smoothly. But price-mechanism certainly enables it to work normally without any serious jolts and jerks.

8. Over Money *vs*. **Cheap Money.** Before we close the discussion on money, we think it necessary to take notice of controversy centring round the policy to be pursued regarding money.

When the economy has been shattered by war or disrupted by depression, one controversy looms large on the economic horizon, *viz.*, should the country follow a dear money policy or a cheap money policy ?

But what do we mean by dear money or cheap money ? Some students are prone to think that dear money means that its value in terms of commodities and services is high, *i.e.*, prices are low, and that cheap money, on the other hand, implies that the value, (or purchasing power) of money is low, and prices have gone up. Now dear money may be associated with low prices, and cheap money, with high prices, but the terms 'dear money' and 'cheap money' are not defined in this sense. The price of money, which the terms 'dear' or 'cheap' are supposed to indicate, is not in terms of its exchange value or purchasing power. The 'price' of money more appropriately refers to the rate at which money can be had or borrowed. Thus, 'dear money' means that the borrowing rates are high and 'cheap money' means that interest rates are low. The price of money, in short, is the rate of interest.

Some advocate dear money policy, while others are in favour of cheap money policy. Which is the best ? It all depends on the economic situation with which we are faced. The rate of interest has been recognised to be an important tool for the execution of an economic policy. There are times when the appropriate economic policy demands that the rates of interest in the money market should be kept low, and there are times when interest rates have to be kept high in view of the economic objectives before the community. For instance, when there is a state of galloping or hyper-inflation, when there is hectic speculative activity, when there is reckless investment by industrialists, where credit creation by the banks has crossed all prudent boundaries, when balance of payments is heavily against the country or threatens to continue unfavourable, a dear money policy is indicated. It is a deflationary move. It will apply a brake on senseless capital investment; it will check reckless credit creation by the banks ; it will stem the rising tide of prices ; it will muzzle the mad career of the speculator ; and it will ultimately put the balance of payments position of the country on a stable footing.

The cheap money policy is indicated in the opposite set of circumstances. For instance, when the business enterprise is groaning under the benumbing and baneful effects of depression ; when the banks are shy of lending when the low price-level is killing economic incentive, when there is widespread unemployment, and when a comprehensive building programme has to be put through and so on. a cheap money policy, or a policy of low interest rates is the best. It will stimulate investment, create employment or reduce the incidence of unemployment ; it will oil the wheels of the industrial machine ; it will, in short, tend to lift the blanket of depression and remove its deadening influences.

The cheap money policy (*i.e.*, cheapening of credit) serves as a tool for (*a*) combating slump, (*b*) fighting unemployment, and (*c*) financing development programmes. When a cheap money policy is adopted, the government has to borrow in the open market. In case there is dearth of credit, the prices of securities will rise and the demand for them will fall. The government will have to rely on institutional investors. Cheap money policy means the monetisation of public debt. *i.e.*, the public debt is turned into liquid cash. If a stage of full employment has already been reached, it will mean an inflationary finance.

Now the question arises : Is it in the power of the State through the central bank or otherwise to fix and control interest rates to keep the money cheap or dear ? Is not the rate of interest determined by the operation of natural forces relating to demand and supply of loanable funds ? As has already been explained, the theory that the rate of interest brings about an equilibrium between demand for saving and the supply thereof has now been exploded. As Sir William Beveridge points out, "The rate of interest cannot fulfil the function (of equilibrating demand and supply), because capital expenditure brings into existence the very savings necessary to finance it. There is no question of 'equilibrating' the one to the other because they are kept in equality by changes in the level of income."[1] If there is a low rate of interest, investment is encouraged. Any expenditure incurred by the community out of loans and reserves will bring additional income and create new sources of saving. Thus low rate of interest does not discourage saving, but it encourages expenditure and investment and makes more savings possible.

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[1] *Full Employment in a Free Society*, 1945, p. 307.

It is now accepted by modern economists that it is in the power of the State to fix and maintain low rates of interest, and the rate is not determined by any natural factors. This is shown by the fact that the ever-mounting demands for loans during war and post-war years have been satisfied at low rates of interest. This clearly indicates the possibility of controlling interest rates. Let us see how it is done. The interest rate can be controlled through a control over savings. For this, it is essential to know the different forms that savings take. There are four ways in which people hold their savings, *viz.*, cash balances, bank deposits, bills, (*i.e.*, short-term investments) and bonds (*i.e.*, long-term investments). The government may decide to fix a particular rate of interest considering the overall economic picture of the country and then leave the saving public to adjust their savings and the forms in which they would wish to hold their savings at that rate. As Beveridge puts it, "That is to say, the government must offer long-term bonds and short-term paper 'on tap' so that savings can flow into them according to the wishes of the savers."

In case, however, it is found that the government is unable to raise the desired amounts at the rates announced and the public subscription to long-term or short-term issues falls short, the government can obtain the balance from the central bank through "Ways and Means" advances. As the government expenditure proceeds, new savings will be created and the cash balances of the banks will go up. The saving that the public can hold in cash and bank deposits are governed by the business turnover ; they will also invest their surplus savings in short or long-term paper.

The feasibility of fixing stable rate of interest is thus beyond question. The government has simply to decide the rate and then offer to the public what they would wish to hold given this rate. The only safegurad is that the change in the rate must be gradual. There should be no sudden break. That is why it will not be feasible to fix a zero rate and then try to maintain it as described above. In case of sudden reduction of the rate, there will be a sudden appreciation of capital assets and long-term money claims ; it will create social tension. The stream of gilt-edged securities will dry up and the very foundation of activities of financial institutions like banks and insurance companies will crumble away.

Having explained the theoretical background let us now consider what should be the right policy for India to pursue in the context of the present economic situation. We are, as it were, on the horns of a dilemma and we must balance ourselves nicely between the two opposed policies. We have to combat inflation. This indicates a 'dear money' policy. That is why the bank rate has been raised from 3 to 3½% and later to 4% as a deflationary measure. On the other hand, considering that during and after World War II there has been a terrible wear and tear of industrial equipment and repairs and replacements were suspended, the industrial equipment stands in need of renovation. Money is needed for this purpose. Then we have a fairly ambitious programme of economic development in all sectors of our economy. We must, therefore, cheapen credit and for that a 'cheap money policy' seems to be essential.

How to reconcile these two objectives ? How shall we proceed ? We would suggest that the back of inflation has been broken. But the demon of inflation has been only scotched, not killed. It may again raise its ugly head. We have, therefore, to be alert on the inflationary front. Subject to this safeguard, we must boldly proceed (or course, cautiously) to see that money flows in to help implementation of our five-year plans. It is not necessary that cheap money policy will have an inflationary effect. Sir Hubert Henderson, writing in the *Economic Journal*[1], says, "My personal opinion is that cheap money policy has been only a very minor factor in the inflationary complex, so unimportant relatively to other factors as to be scarcely worth considering." His recipe for England, which equally applies to us, is "I submit that when all relevant considerations are weighed, it is right to undertake long-term investment work on a substantially larger scale than a purely trade cycle calculus would indicate as appropriate. We cannot allow acute housing shortage—which causes much more human hardship than does the lack of consumer goods and which incidentally seriously reduces the industrial mobility of the national labour force—to continue unrelieved, until economists signal 'Deficiency of aggregate demand, Turn on the tap of public works'."[2] To this we might add in our own case that we cannot wait and be silent spectators of our starving millions. We must do something to raise our sub-human living standards. Cheap money must be made available to the extent necessary.

9. Neutral Money Policy.[3] We have discussed above the *pros* and *cons* of dear money *vs.* cheap money. But there is the third course open *viz.*, neutral money policy. This policy is based on the philosophy of *laissez-faire*. In practice, however, it is a departure from the *laissez-faire* doctrine inasmuch as, to achieve the objectives of neutral money policy, the monetary authority will have to pursue an active policy. The neutral money theory is associated with the name of Prof. F.A. Hayek. The advocates of this theory believe that the most important causes of economic instability lie in the monetary changes. Eliminate them and you ensure a smooth and steady economy.

What is neutral money policy ? It is a policy which seeks to neutralise or eliminate the dislocating and disturbing influences caused by the creation or expansion of money on the one hand, and its destruction or contraction on the other. The creation or injection of new money is supposed to cause inflation whereas withdrawal or contraction of money produces a deflationary effect. Inflation is associated with cheap money and deflation with dear money. From the point of view of economic stability or stability of prices, output

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1. September, 1947.
2. The *Economic Journal*, September, 1947, p. 268.
3. *See* Halm, G. N.—*Monetary Theory*, 1946, pp. 122-31.
   Study also Hayek, F. A.—*Prices and Production*.
   —*Monetary Theory and Trade Cycles*.

and employment, both inflation and deflation are considered bad. We should have neither the one nor the other. Money should be neither dear nor cheap.

The neutral money policy is thus identified with zero-mark of inflation and deflation. It seeks to create a state of affairs as if money did not exist lest it should either be inflationary or deflationary, and as if exchanges (trade) were all by barter. But since money does not disappear altogether, inconveniences of barter do not exist. In the pursuit of the neutral money policy, the monetary authority has to so regulate the supply of money that the production levels, price-levels and the volume of transactions are such as if the community did not use any money. It is supposed that if the distorting influence of circulating media were kept out, the economy of such an imaginary non-monetary community would be kept stable through the operation of natural forces of competition.

How to achieve the aim of neutral money policy ? We have seen what the neutral money policy aims at. The question is, how is this aim to be realised ? We should bear in mind that under this policy both inflationary and deflationary tendencies have to be curbed. Can we do it be keeping the supply of money constant ? Not at all. We know that price changes are not merely caused by changes in the supply of money but also by such factors as changes in population, improvement in technique and transport, changes in velocity of circulation of money, etc. They must also be neutralised. If the supply of money were kept rigidly fixed, economic progress and improvement in productive efficiency would bring about a disastrous fall in prices in a generation, and this is precisely what a neutral money policy does not want. Thus merely avoidance of money creation or money destruction will not achieve the objective of neutral money policy.

What then should the monetary authority do ? If population increases, demand for money will increase and this demand must be satisfied, otherwise shortage of money will be deflationary. This the neutral money policy must avoid. If velocity of circulation of money increases, it will be inflationary, and to check that, the speed at which money is being created must be slowed down. If due to invention and other technical improvements or improvements in the productive efficiency of the factors, the volume of production goes up, then the quantity of money is not to be increased because in this case the fall in prices is not dangerous or disturbing. If due to improvement in transport, business turnover increases, more money must be created to cope with the increased traffic. If the movement towards vertical integration of business becomes strong, demand for money will be correspondingly reduced. The monetary authority should take this factor, too, into consideration and adopt compensatory measures. It must also keep a close watch in the policies of the monopolists to keep their prices at reasonable levels. In short, it has to keep its eye on the price-level rather than keep the supply of money constant so that dangerous turns in prices are avoided.

How far could this policy be efficacious? On the paper the theory looks simple and the neutral money policy seems straight. Actually there are so many complications. The theory, however, wrongly assumes that the sole or the important determinants of business cycles are the monetary changes. So diverse are the factors affecting price-levels, volume of output and employment that no amount of monetary regulation can ensure stability. The modern economists are not prepared to subscribe to the view that the business cycle is a purely monetary phenomenon. The neutral money thus suffers from serious limitations.

How does neutral money policy differ from the policy of price stabilisation ? In order to distinguish between the neutral money policy and the policy of price stabilisation as such, we should bear in mind that there are two types of price-levels : one is the *general* price-level, a sort of average of all price-levels ; and the other is the *relative* price-level. In one sense, the aim of both these policies is the same. Both seek to neutralise money and make it play a passive role so that if there are any economic fluctuations, money should not be held to blame. The aim of both is to remove a major cause of economic fluctuations. But there is this difference between the two : the aim of the policy of price stabilisation is to prevent changes in the *general* price-level so that money as a unit of account remains neutral or behaves in a stable manner. The aim of the neutral money policy is to keep the structure of *relative* prices stable. For this purpose, it seeks to regulate the total effective quantity of money so that money as a medium of exchange is not allowed to cause any disturbance in the economy.

10. Objectives of Monetary policy[1]. Several objectives of monetary policy have been suggested. Among these we may mention the following chief goals of monetary management :

(1) Exchange stability ;
(2) Price stability ;
(3) Neutral money ; and
(4) Economic stability.

There are some authorities who attach a very great importance to maintaining the rate of foreign exchange stable. This would be an important facility to foreign trade and it would eliminate hazards from international trade. We will discuss exchange stability in a later chapter.

In this chapter, we have already discussed problem of price stabilisation. Violent price fluctuations have admittedly a disturbing effect on the economy besides inflicting undue losses on certain sections of the community and conferring undeserved gains on others. But a rigidly fixed price-level is neither desirable nor feasible.

We have also just discussed at some length the neutral money policy and its limitations and we feel that we cannot recommend it as a desirable objective of monetary policy.

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[1] For detailed discussion *see* Chandler, L.V.—*An Introduction to Monetary Theory*, 1950, Ch. VIII.

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The most desirable aim of a monetary policy seems to be to ensure economic stability as far as it lies in monetary policy to ensure it. It should contribute to an orderly economic development so that the entire economy has smooth voyage. The Board of Governors of the U.S. Federal Reserve System defines economic stability as "the maintenance of as full employment of labour and of productive capacity of the country as can be continuously sustained." This goal may also be called "the maximum utilisation of the national resources". While issuing a statement on "Objectives of Monetary Policy," the Board thus sums up its conclusions : "The Board believes that economic stability rather than price stability should be the general objective of public policy. It is convinced that this objective of public policy cannot be achieved by monetary policy alone, but that the goal should be sought through co-ordination of monetary and other major policies of the Government which influence business activity, including particular policies with respect to taxation, expenditures, lending, foreign trade, agriculture, and labour."[1] The contribution that monetary policy can make towards stability of economic life of a country will be discussed in a later chapter.[2]

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1. *International Currency Experience*, 1944, pp. 109-10.
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CHAPTER XXXIV

CREDIT

What is Credit ? While discussing the forms of money, we made a brief reference to credit or bank money. Credit means good opinion founded on the belief in a person's "veracity, integrity, ability and virtue." Credit refers to the confidence in a person's willingness and ability to pay. A person's credit depends on three C's—character, capacity and capital. It is a combination of all these qualities which go to make a man's credit. He must be honest and fair in his dealings with others; he must also have capacity for making his business a success ; and he must be a man of substance. Credit is thus an attribute of the borrower.

a. Credit Instruments. Credit plays a dominant role in modern business and this is done through the use of credit instruments. Book Debts, Promissory Notes, Bills of Exchange, Bank Notes, Cheques and Drafts are the common credit instruments.

Bank Notes are not, strictly speaking, credit instruments unless they are issued by ordinary banks without the authority of the State behind them. Nowadays, the central bank enjoys the monopoly of note-issue. These notes are regarded as currency or money rather than credit instruments.

Promissory Note. It is the simplest kind of a credit instrument. It contains the buyer's promise to pay the seller a certain sum of money for value received. The payment is to be made after a specified period of time. Such a document may be used for personal or commercial transaction. A bill of exchange is used for commercial purposes only.

Bill of Exchange. A bill of exchange is an order payable on demand or at a fixed future time addressed by one person, generally the creditor ("drawer") to another, generally the debtor (called the "drawee") instructing the latter to pay a certain sum of money (mentioned on the bill) to the former or to the bearer or to a specified third person (called the payee).

A Bill is discounted by calculating interest on its face value (the amount finally to be paid) for the period for which the bill has still to run, at the prevailing rate of discount, and deducting this from the face value of the bill. This, then, is the price at which the bill can be sold by the holder at any time.

The form that a bill of exchange usually takes is given below—

£ 100 **DELHI**
***July* 15, 1959**

Three months after date pay to the order of the State Bank of India, Ltd. £ 100 for value received.

G. LALL.

F. Jones & Sons
London.

G. Lall from Delhi has exported to F. Jones and Sons of London goods worth £100 in English money. This bill will mature after three months and three days from the 15th July, 1959, *i.e.*, on the 18th October, 1959. During this period, it can pass from hand to hand by being endorsed.

The area of circulation of the bill obviously depends upon the credit of the acceptor. People get their bills accepted by well-known firms (Accepting Houses) which specialise in this business, and thus make their bills circulate easily over extensive areas.

A bill of exchange enables business men to buy goods without making payments in cash. Before the bill matures, the goods can be sold and money obtained for meeting the liability. Thus, business can be carried on without the use of much capital. On the other hand, this method enables the exporter (or seller), if he wants money immediately, to get it by discounting the bill. Further, the bill of exchange saves cost of transporting precious metals between the countries. It is a cheaper and more convenient way of making international payments. It enables every exporter to get value for his exports in his own currency. It is thus of great help in financing foreign trade.

Moreover, a bill of exchange is a very convenient way of investing liquid funds. When money is needed, the bill can be discounted at the bank. This method is very commonly used by banks to keep their reserves liquid. They can get the bills rediscounted at the central bank.

Hundi. In India, bills of exchange have been in use from very early times. They are known as Hundis. A hundi is an internal bill of exchange. It helps in the financing of internal trade and remittance of money. Hundis are of two kinds : (*i*) *Darshni Hundi*, which is more or less like a cheque and has to be cashed immediately when it is presented, and (*ii*) *Muddati Hundi* which has to be paid after a period of time specified on it. This is more like a bill of exchange.

Cheque. A cheque is an order on bank by its client, who has already deposited (or acquired by loan) money with it, to pay on demand the stated sum to the bearer or to the order of the person in whose favour the cheque is drawn. The former is a "bearer cheque", and the latter is an "order cheque". When a cheque is crossed (by drawing two parallel lines across its breadth), it can only be deposited in the bank account of the person in whose favour it is drawn or his order. Such a cheque cannot be cashed at the counter. A "bearer cheque" is not crossed and can be cashed by any one who holds it. If it is an "order cheque", the responsibility of payment to the right person is on the bank.

One advantage of a cheque is that it economises money. Cheques can be created by all banks while the note-issue is restricted to the central bank. Cheques can be drawn to an exact amount, *e.g.*, Rs. 100.40np. The use of cheques is facilitated greatly by Clearing House arrangements described below.

Draft. A draft is a cheque drawn by one bank upon another.

It may be on a home bank or on a foreign bank payable in foreign money.

3. Clearing House. A Clearing House is an institution where cheques drawn on various banks are cancelled against one another and only the balance is paid. The working of a Clearing House is made clear by the following example. Suppose there are four banks. A, B, C and D, whose accounts are cleared in a certain Clearing House. Each bank sends its representative with cheques to be cleared.

Suppose on a particular day the claims of these four banks on one another are as follows :—

		Rs.
Bank A : cheques on Bank	B	= 5,000
,, ,,	C	= 4,000
,, ,,	D	= 2,000
Total		11,000
Bank B : cheques on Bank	C	= 5,000
,, ,,	D	= 1,000
,, ,,	A	= 4,000
Total		10,000
Bank C : cheques on Bank	D	= 5,000
,, ,,	A	= 6,000
,, ,,	B	= 3,000
Total		14,000
Bank D : cheques on Bank	A	= 3,000
,, ,,	B	= 1,000
,, ,,	C	= 5,000
Total		9,000

The total sum of all the cheques to be settled is Rs. 44,000. If we look at the credits and debits of each of the banks, the position is given below :

Bank	*Credit (is owed)*	*Debit (owes)*	*Balance (+ in favour —against)*
	Rs.	Rs.	Rs.
A	11,000	13,000	−2,000
B	10,000	9,000	+1,000
C	14,000	14,000	Nil
D	9,000	8,000	+1,000

Thus if bank A pays Rs. 1,000 to B, and Rs. 1,000 to D, the whole account is cleared. An account of Rs. 44,000 is cleared by the payment of only Rs. 2,000. Even these payments are not made in cash but by cheques on the central bank. Thus great advantage is obtained by the use of cheques and the Clearing House system.

In India, clearing arrangements exist in the offices of the State Bank of India in the principal cities like Calcutta. Bombay, Madras, etc.

Cheques, however, can serve only a limited circle of people known to each other or relying upon each other's credit. A cheque is not legal tender.

4. Factors Determining the Volume of Credit. Credit implies borrowing and lending. There are times when borrowing and lending go on briskly. This is the time of credit expansion. At other times the debtors or the creditors become shy, and the borrowing or the lending is reduced. Thus credit-expansion and credit-contraction depend on the willingness of the creditors to lend and the willingness of the borrowers to borrow. This willingness is based on certain objective considerations of which the following are the principal ones :—

(*i*) *Trade Conditions.* If trade is good, the borrowers are very keen on borrowing. The creditors are also not averse to lending, because at a time of brisk trade, tempting rates of interest are offered. Also, they can be sure of the return of money, because profits are being made left and right. But when there is depression, credit contracts. The business men are loath to invest. Although the banks may be willing to lend yet the borrowers may not be willing to borrow. 'You may take the horse to the water, you cannot make him drink.'

(*ii*) *Political Conditions.* The business world, in modern times, has become very sensitive to political happenings. When war-clouds are hovering overhead, few would launch new ventures. The same is the case when there is an internal upheaval. A threatening speech by an influential politician frightens capital away. Peace and stability make for credit expansion.

(*iii*) *Speculative Activity.* Credit expansion and speculative activity move together. When speculation is rife, credit expands, and when speculators lose, credit contracts. But credit is not merely the effect of speculation, it is also the cause of it.

(*iv*) *Currency Conditions.* A sound currency system is highly conducive to credit expansion. When currency conditions deteriorate—for instance, when currency is debased or depreciated —credit contracts. Currency is the very instrument of credit and when the instrument itself is bad, credit must suffer.

5. Utility and Functions of Credit. Credit performs many useful functions for the economic prosperity of country, thus :—

(*i*) Credit economises the use of metallic currency. Credit instruments serve in place of coins and thus save much unnecessary expense.

(*ii*) It helps in the financing of the industry by making possible huge loans to business men.

(*iii*) It increases the productivity of capital. Idle money, through the agency of banks, is made available to people, who can use it productively.

(*iv*) By means of credit, large sums can be lent by banks against small cash reserves.

(*v*) Credit instruments, especially bills of exchange, greatly facilitate payments in international trade. Payments can be made without movement of treasure to any large degree.

6. Dangers of Credit. We have seen above that credit is a great boon to business community. But it has also dangerous potentialities. Credit is a dangerous and delicate weapon and has to be wielded with all possible care and intelligence. The following are some of the dangers :—

(*i*) *Over-issue of Credit.* The currency authority may resort to inflation, or the banks may lend freely, rather too freely. In such circumstances, prices will begin soaring high and an element of uncertainty will be imported into the business world. The abnormal rise in prices, which invariably accompanies the over-issue of credit, gives a feeling of false prosperity and induces rashness and extravagance. *Liability to excess*, therefore, is the greatest danger of credit.

(*ii*) Another danger of credit is that of extravagance. One is not likely to be so careful in the use of borrowed money as he is in the use of his own. Rash and reckless enterprises may be launched. Credit may thus encourage wasteful expenditure by irresponsible business men and by government.

(*iii*) Credit may be the instrument of propping up financially weak and economically inefficient business concerns. In the absence of credit facilities, they would have gone under and purged economy of black spots.

(*iv*) Credit places vast amounts of capital at the disposal of individuals and corporations. Mammoth concerns are brought into being. There is the danger of monopolistic exploitation—exploitation of consumers and workers, and the adoption of unfair methods in business dealings.

7. Credit and Prices. How does credit affect prices ? Is the effect the same as of ordinary currency ? This has been a controversial matter. Mill and some others following him asserted that credit influenced prices exactly in the same way as cash, credit being as good a purchasing power as cash. On the other hand, the American economists, Walker, Laughlin and others, held the view that credit had no influence on prices. They believed that credit no doubt did possess purchasing power, but it had no liquidating power. To complete a sale, the payment has to be made in cash ultimately. Once created, they believed, debts could only be cancelled by cash.

Both these views are extreme and hence only partially correct. The truth lies between the two. If credit instruments were perfect substitutes for cash, they would exert exactly the same influence on price-level as cash. Actually people have more confidence in cash than in credit instruments. Hence the banks have always to keep a certain proportion of cash against their liabilities. When credit expands, some cash has to be withdrawn from circulation to serve as reserve. Therefore prices do not rise to the same degree as they would if no cash had been withdrawn. But since only a small proportion of the heavily expanded credit is backed by cash, credit can and does, lead to inflationary rise in prices if not kept within limits. And this is the danger of credit, *i.e.*, its over-expansion.

8. Credit and Capital. Credit has been wrongly regarded as synonymous with capital. It is sometimes said that credit instruments, cheques, drafts, bills, etc., are, for practical purposes, money, and, when used in business, they are, in effect, capital. This is not so. These instruments are not money in themselves. They only *represent* money. If I give somebody a cheque, I do not give him cash. I only give him the right to get cash lying in the bank. Hence credit is not capital, but it only enables a business man to get a control over capital goods like plant and machinery.

Nor does credit create capital. It only transfers capital from one person to another. This transfer is all for the benefit of the community. By means of credit, wealth is transferred from those with whom it is lying useless to those who can make a better use of it. Hence this transfer is very productive. Credit thus undoubtedly aids production but it is not in itself an instrument of production. It just makes those instruments available and puts them in the right hands. *A* lends Rs. 5,000 to *B*. *A* may think he owns Rs. 5,000 and *B* says he has got Rs. 5,000. But Rs. 5,000 do not become Rs. 10,000. There is only one amount of Rs. 5,000. Credit has not created another amount of Rs. 5,000. But it has only transferred Rs. 5,000 from *A* to *B*. Credit, therefore, cannot be elevated to the position of an independent factor of production. *Hence we come to the conclusion that credit is not capital, nor does it create capital. It is only the means of transferring capital.*

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CHAPTER XXXV

BANKING

1. **Evolution of Banks.** A bank is an institution which deals in money. Broadly speaking, banks draw surplus money from the people who are not using it at the time, and lend to those who are in a position to use it for productive purposes. Modern banks have developed from very small beginnings. The earlier bankers were goldsmiths. In Europe they were also money-changers. As the goldsmiths dealt in precious metals, they had to arrange for the safety of their treasure. People with surplus money or gold gradually began to deposit their precious metals with such persons. This in a primitive way was the beginning of what is called deposit banking. The goldsmiths would issue receipts for the metal received. As every one believed in their integrity and their ability to honour these receipts, through experience in course of time, these receipts began to pass from hand to hand in payment of obligations instead of being first converted into gold. These receipts were the earliest bank notes.

The goldsmiths soon found that only a small proportion of the metal deposited with them was taken out by the depositors. They, therefore, began to make profit by lending a part of these deposits. In this lending, it was not always gold that they gave but issued their receipts, which would pass among the people as if they were gold. Thus the banks issued several times more of such receipts (notes) than the metal deposited with them.

Crowther observes that "the present-day banker has three ancestors : merchant, money-lender and goldsmith. A modern bank is something of each of these. It is said that money has two properties. It is flat so that it can be piled up, and it is round so that it can circulate. The progeny of the money-lender are concerned with flat money, piled up money, savings. The progeny of the goldsmith are concerned with round money, circulating money, cash."[1]

Gradually, the banking business passed from individuals to joint-stock concerns. It was a long time before the state realised the danger of allowing every bank to issue notes. Gradually the note-issue function was taken over from the ordinary banks and was entrusted, under strict regulations, to the central banks.

The banks in the meantime discovered new methods of creating purchasing power. They allowed their clients to issue cheques against the deposits outstanding to their credit. These deposits were not necessarily the money actually "deposited" by the clients. They could be created by the bank allowing what are known as "overdraft facilities" or by advancing loans against securities. As long as bank was sure of a safe proportion of cash reserves, it could raise a high superstructure of credit by advancing loans or giving overdraft facilities.

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[1] *An Outline of Money*, 1950, pp. 24-5.

2. Kinds of Banks. Considerable specialisation has taken place among banks with regard to various spheres of their activities. The main types of banks are given below :—

(*i*) *Commercial Banks.* These are chiefly engaged in financing internal trade and also carry on other ordinary banking business of receiving deposits, advancing loans and of discounting bills.

(*ii*) *Industrial Banks.* These institutions specialise in the financing of industry. They advance loans for long periods to people who carry on industrial enterprises.

(*iii*) *Agricultural Banks.* Such banks provide long- and short-period finance to agriculturists. Long-period capital is required for acquisition and improvement of land and purchase of heavy equipment. Short-period capital is necessary for current expenditure on seed, manures. wages, etc. In India such banks take the form of co-operative societies for short-period lending and land mortgage banks for long-period loans.

(*iv*) *Exchange Banks.* The main function of such banks is to buy and sell foreign currencies, rather titles to foreign currencies, in the form of bills of exchange, drafts, telegraphic transfers, etc.

(*v*) *Saving Banks.* These institutions provide facilities to people, usually of small means, to save money. Post Offices in India carry on this function. Of course other banks also accept savings deposits.

(*vi*) *Central Bank.* A central bank is most important institution in the banking system of a country. In fact it directly and indirectly controls the activities of all other banks.

It should be noted that all these banks overlap in many respects in their functions. Their names indicate only the primary functions in which they specialise. General banking functions are common to all in varying degrees.

3. General Banking Functions. Broadly speaking there are three functions that banks (other than central banks) perform : (*a*) receiving deposits ; (*b*) advancing loans ; and (*c*) discounting bills.

(*a*) *Receiving Deposits.* This function is important because banks mainly depend on the funds deposited with them by the public. Deposits are of three kinds (*i*) current or demand deposits, (*ii*) fixed or time deposits, and (*iii*) savings deposits. On current or demand deposits, the bank pays practically no interest. They can be withdrawn in part or in full at any time by issuing a cheque. Fixed deposits are so called because they are left with the bank for a certain fixed period before the expiry of which they cannot be withdrawn except after giving due notice. On such deposits the bank pays higher interest. Savings deposits can be withdrawn once or twice a week. There is also a limit of total weekly withdrawals, generally Rs. 1,000.

In actual fact, only a small percentage is withdrawn at any particular time. But since withdrawals can and do take place, the bank has to keep a certain proportion of its assets in liquid condition. The rest can be lent for varying periods. This brings us to the second function of banks.

(*b*) *Advancing Loans.* In this respect, the banker has to shoulder a heavy responsibility. The bank makes profit by advancing loans. But the bank deals in other people's money and it has to keep ready to meet the depositors' demands. Hence great care has to be exercised in the matter of lending and keeping reserves. The bank must strike a fine balance between liquidity and profitability. If it keeps its assets in too liquid a form, it loses profit and if it tries to make too much profit it may not be able to meet the depositors' demands. It must aim at both liquidity and profitability.

It should be noted that the bank does not only lend funds actually deposited with it by its clients. The bank can itself *create* deposits and thus make advances considerably in excess of the sums deposited with it. After satisfying itself that the purpose for which the loan is required is economically sound and after taking precautions as regards security, the bank gives its client the right to draw cheques. The loan thus becomes a deposit to the credit of the customer concerned. If the customer, by a cheque or a series of cheques, withdraws this amount, the payment is made to somebody. These cheques in their turn, come back either to the same bank or to other banks of the country or locality. They appear as deposits in the credit of the various people to whom the payments were made. Thus it is that "loans create deposits." In modern time, deposits of cash have changed into deposits of credit.

(*c*) *Discounting Bills.* Discounting of bills is, practically speaking, lending for short periods. A trader, for instance, who does not wish to lock up large funds in trade credits, may draw a bill of exchange on his debtor, and, after it has been accepted by, or on behalf of, the debtor, he may get it discounted by his banker. This gives the trader immediate possession of the money due to him, less a deduction for the loss of interest and for the commission to the bank. These bills are usually for three months, and when they mature, the bank realises the face value of the bill. Thus the bank earns a profit in addition to facilitating trade. These bills mature after short periods, and, if the worst happens, they can be rediscounted. This is a common way of keeping a part of the assets of the bank in a liquid form. The bankers regard discounting of bills as a very good investment. That is why it is remarked that a good bank manager knows the difference between a bill and a mortgage. In modern times, trade bills occupy a very small position as compared with Treasury Bills in the discount market.

The main functions of the banks can be summed up in one sentence : *The banks borrow to lend.* They borrow in the form of deposits, *viz.*, (*a*) Fixed Deposits, (*b*) Savings Bank Deposits, and (*c*) Current Deposits in Accounts. The banks lend in three ways : (*a*) on open account or overdraft ; (*b*) loans on the cash credit basis ; and (*c*) discounting of bills.

The banks borrow short and lend long. Their liabilities mature earlier than their loans. Their liabilities are money and their assets partly money and partly near-money. The interest they have to pay on their liabilities is, therefore, less than what they earn on their assets. "The nearer to money that near money is, the lower is the income it will yield. The further away from money the higher is the yield.'[1]

Apart from the above main functions, the banks perform a number of other services for the people. They help in the transfer of funds from one place to another and from one person to another through the use of cheques. Some banks *accept* bills on behalf of their clients and thus make them more easily negotiable. They supply information and advice to their clients on matters relating to investment. In addition, they perform miscellaneous services like taking charge of valuables and securities, acting as agents, trustees and bailees of their customers, purchasing and selling stocks and shares on their behalf, paying subscriptions to clubs and charitable institutions at regular intervals, etc.

4. Creation of Credit and its Limitations. Creation of credit is one of the most outstanding functions of a modern bank. A bank has sometimes been called a factory for the manufacture of credit. Let us see what we mean by credit creation, how it is created by the banks and, finally, whether the power of the banks to create credit is absolute and unlimited or it is subject to certain limitations.

What is credit creation ? It is an open secret that the banks do not keep cent per cent reserve against deposits in order to meet the demands of depositors. The bank is not a cloak room where you can keep your currency notes or coins and claim *those very* notes or coins back when you desire. It is generally understood that moneys received by the bank are meant to be advanced to others. A depositor has to be content simply with the bank's promise or undertaking to pay him whenever he makes a demand. This the banks are able to do with a very small reserve, because all the depositors do not come to withdraw money simultaneously ; some withdraw, while others deposit at the same time. The bank is thus enabled to erect a vast superstructure of credit on the basis of a small cash reserve. The bank is able to lend money and charge interest without parting with cash. The bank loan creates a deposit, as we have seen above, or it creates a credit for the borrower.

Similarly, the bank buys securities and pays the seller with its own cheque which again is no cash ; it is just a promise to pay cash. The cheque is deposited in some bank and a deposit is created or credit is created for the seller of the securities. This is credit creation. The term 'credit creation' implies a situation, to use Benham's words, when "a bank may receive interest simply by permitting a customer to overdraw their accounts or by purchasing securities and paying for them with its own cheques, thus increasing the total bank deposits."[2]

How is credit created ? As has been hinted above, there are two ways in which a bank creates credit : (*i*) By advancing loans on the cash credit basis or by an overdraft arrangement ; (*ii*) by purchasing securities and paying for them with its own cheque.

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[1] Crowther, G.—*An Outline of Money*, 1930, p. 66.
[2] *Economics*, 1940, p. 354.

In both these cases, deposits are created (or credit is created for the borrower) and credit of the bank is embodied in a definite transaction. In all, a very small cash reserve is kept by the bank to meet the obligations arising out of these transactions and the credit created aggregates to a very big amount.

Let us see the actual process. Suppose a customer deposits Rs. 1,000 in a bank. The bank has to pay him interest; therefore the bank must seek a safe and profitable investment for this amount. It must lend it to somebody. But this amount is not actually paid out to the borrower ; it is retained by the bank to meet its obligations, *i.e.*, to pay to those of its depositors who need cash and draw cheques for the purpose. The banker's experience tells him that for this purpose only a certain percentage of cash reserve to total liabilities need be kept. In countries like England, they keep nearly 10 per cent. The ratio of cash to liabilities is much higher in countries like India, where banking habit has yet to develop. Suppose the bank, in which a depositor has deposited Rs. 1,000, keeps 20 per cent cash reserve to meet the demand of depositors. This means that, as soon as the bank has received Rs. 1,000 it will make up its mind to advance loans up to the amount of Rs. 5.000 (only one-fifth reserve is kept). When, therefore, a business man comes to the bank with a request for a loan of Rs. 5,000, he may be sure of being granted accommodation to this extent, provided of course, his credit is good. The bank lends Rs. 5,000 although it has only Rs. 1,000 in cash. It is here that credit comes in. This transaction is rendered possible because the borrower is not given the loan in cash ; only an account is opened in his name and the amount is credited to that account. He is simply given the cheque book, *i.e.*, the right to draw cheques as and when he needs money. Even when he withdraws cash, it may be deposited in another bank, for business men do not raise funds to keep them locked up in a cash box but to run their business and to make payments to their creditors. When this particular business man draws cheques on this bank to pay his creditors, these cheques are passed on by them to their own banks, where the amount is deposited in their account. Cash is seldom withdrawn. The banks adjust their mutual obligations through a system of bank clearing. Thus the bank has succeeded in creating a credit of Rs. 5,000 against a cash reserve of Rs. 1,000.

But the process of credit creation does not stop here. The banks generally keep their spare cash in the central bank. A portion of Rs. 1,000, therefore, is deposited in the central bank which in its turn uses it as a basis for similarly creating further credit. Just as the banks go on creating credit (*i.e.*, advancing loans on cash credit) all the time relying on their cash balances with the central bank, in the same manner the branch banks go on accommodating their local customers relying on the resources of the head office. The movement of credit creation thus goes apace. This is one way of creating credit.

The second way of creating credit is very simple. The bank can purchase securities without paying any cash. It issues its own cheque to pay the purchase price. The cheque is deposited in this bank or some other bank and the small cash reserve which the bank keeps is sufficient to meet an obligation arising from this transaction too. It is thus that, on a small cash foundation, a vast superstructure of credit is built up.

The Limitations. From the account of credit creation given above, it would seem that 'the banks reap where they have not sown'. They advance loans or buy securities without actually paying cash. But they earn interest on the loans they give or earn dividends on the securities they purchase all the same. This is very tempting. They make profits without investing cash. They would, of course, like to make as much profit, like this, as they can. But they cannot go on expanding credit indefinitely. In their own interest, they have to apply the brake, and they do actually apply it, for it is well known that the profits made by the banks are not very high. *The overriding limitation arises from the obligation of the banks to meet the demands of their depositors.*

Benham has mentioned three limitations on the powers of the banks to create credit ;

(*i*) The total amount of cash in the country ;

(*ii*) The amount of the cash which the public wishes to hold ; and

(*iii*) The minimum percentage of cash to deposits which the banks consider safe.

As for (*i*), it may be said that credit can be created on the basis of cash. The larger the cash (*i.e.*, legal tender money) the larger the amount of credit that can be created. But the amount of cash that a bank may have is subject to the control of the central bank. We shall study this influence in full in the next chapter. Here it may suffice to say that the central bank has the monopoly of issue of cash. It may increase it or decrease it, and credit will expand or contract accordingly. The power of the central bank to control currency is the controlling influence on the extent of credit that the banks have the power to create.

The second limitation arises from the habit of the people regarding the use of cash. If people are in the habit of using cash and not cheques, as in India, then as soon as credit is granted by the bank to a borrower, he will draw the cheque and get cash. When the bank's cash reserve is thus reduced, its power to create credit is correspondingly reduced. On the other hand, if people use cash only for very small and odd transactions, then the cash reserve of the banks is not much drawn upon, and their power of creating credit remains unimpaired. This is the case in advanced countries like the U.S.A., England and other European countries. There the banks hardly keep 10 per cent cash reserve.

The third limitation is the most important. It arises from the traditional reserve ratio of cash to liabilities, which the banks must maintain to ensure the safety of the bank and to retain the degree of liquidity that is considered desirable. It is clear that when a bank creates a credit or grants a loan, it undertakes a liability. There is an increase in its liabilities and there is correspondingly a fall in the reserve ratio. The bank will not let the ratio fall below a certain minimum. When that minimum is reached, the power of the bank to create credit comes to an end. To grant any further credit will be risky unless the bank's experience is reassuring enough to permit the adoption of a lower percentage. Then that would be the limit.

To these may be added the fourth limitation. The bank cannot create credit without acquiring asset (in this case the borrower's promise to pay on some security). An asset is a form of wealth. Thus the bank only turns immobile wealth into mobile wealth. Hence, as Crowther observes, " the bank does not create money out of thin air, it transmutes other forms of wealth into money."[1]

To sum up : The essential conditions for the creation of credit are that the banks obtain fresh cash reserves, they should be willing to lend and the business men should be willing to borrow, and the borrowers should not withdraw the amount of the loan but be content to leave it in the form of deposit with the bank. The initiative is in the hands of the borrowers. The deposit is, in fact, created not by the amount borrowed, but by the amount not withdrawn.

5. **Maintenance of Reserves.** The secret of sound banking consists in the maintenance of adequate reserves, while at the same time making profits for the shareholders. A bank, we have seen, deals with other people's money in the sense that the money can be withdrawn with or without notice. But by experience, the bankers know that only a small proportion of the deposits is actually withdrawn. Their aim, therefore, is to maintain adequate reserves to meet this demand and make profit by lending the rest. This requires a good deal of skill. As already pointed out, a wise banker must maintain a proper balance between liquidity and profitability. Too much caution may mean too meagre profits, while reckless lending may endanger the safety of the bank. Liquidity and profitability are opposing considerations. There has to be a compromise, but it is an uneasy compromise. Because whatever the form and quantity in which they keep their reserve, they are found to be unnecessary in normal times and insufficient when the depositor's confidence is shaken. The amount of reserve kept by a bank is governed, among others, by three factors :[2] (1) day-to-day fluctuation in the amount of bank's deposits ; (2) the variability of the customers borrowing needs ; and (3) the nature of secondary reserves ; and character of reserve organisation in the banking system.

Usually a bank keeps its assets in a descending order of liquidity or realisability into cash. Its first line of defence, as the term goes, is to maintain a certain amount in actual cash. This cash is kept either in the form of coins or in the form of currency notes or as a balance with the central bank. The issue of currency notes is a monopoly of the central bank.

The balance with the central bank can always be withdrawn in the form of legal tender currency. The banks thus treat such balance as cash. All important banks either by law or by convention keep a certain proportion of their liabilities in the form of balances with the central bank of the country. It may be incidentally mentioned that the existence of such balances gives the central bank great power over other banks of the country in the matter of controlling the credit expansion by the latter.

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[1] *Op. cit.*, p. 30.

[2] Kilborne and Woodworth—*Principles of Money and Banking*, 1937, p. 291.

The second line of defence in maintaining reserves is the money lent for very short periods, technically called in England, 'money at call and short notice.' This is mainly lent to discount houses, bill brokers and petty stock brokers. Such loans can be recalled either on demand or within a few days.

After this come the bills discounted. These become liquid as they mature. These may be Treasury Bills issued by the Government or commercial bills.

Then come investments. These are mainly government securities. The fixed interest-yielding securities, also called "gilt-edged" securities in England, are most popular for the purpose, since there is practically no risk in such investments.

Finally come advances to customers. They may take the form of loans or overdrafts. They bring the highest profits, though the risk is the greatest in their case, since they are the least liquid.

6. Importance of Liquidity. The proportion in which the various forms of assets are kept vary from country to country, from bank to bank, and vary also with the state of trade. The larger the "liquidity"of the assets, the more confidence a bank will inspire, but the lower will be its profits.

The whole banking business runs on the confidence of the people in the ability of the banks to pay their money back on demand. If such confidence is lost for any reason, there is a 'run' on the bank. No bank can face a run because all the deposits are not in liquid form. Banking business is said to be a 'fair weather' business. So long as the skies are sunny, *i.e.*, so long as the depositors are happy with the bank and nobody wants to withdraw his money, the bank says, "Anybody can have his money back." But as soon as the skies are overcast and the depositors get nervous and all depositors wish to take out their money, then none can have it. If there is a single patch of cloud on the sky, *i.e.*, if only one bank is involved in a run, it may perhaps be able to meet its liabilities by converting its assets into cash. But if the whole atmosphere is gloomy, and there is a general panic, depositors of all banks will have to go disappointed.

Thus it is necessary for a bank not only to keep a certain proportion of its assets liquid, but also to see that people's confidence in its soundness is not shaken. Bankers must take into account a certain degree of proclivity on the part of the depositors. When they know they can have their money back, they do not have it, and as soon as they suspect they cannot have it, they insist on having it. The best way to inspire confidence is freely to give credits in times of panic. Central banks also come to the help of member-banks on such occasions.

To keep the people informed of their financial position, the banks are required by law to publish their accounts in the form of what is called a "Balance Sheet". A bank's balance-sheet is a statement of its financial position. Usually such a statement is issued at the end of the financial year. The central bank, however, issues it weekly. The balance-sheet consists of two columns. The column on the left-hand side gives the liabilities of the bank and that on the right its assets. Liabilities are what the bank owes to others, and assets are what others owe to the bank in addition to what the bank actually possesses in hand.

Liabilities	*Assets*
Capital	Cash
Reserve Fund	Cash at Central Bank
Deposits	Money at Call
Acceptances for Customers (*as per contra*)	Bills discounted
	Investments
	Liabilities of Customers for Acceptance (*as per contra*)
	Furniture and Fittings
	Premises and other Property

In the balance-sheet the banks are anxious to show that their position is very sound. This they can do by keeping a big cash reserve or higher ratio of reserve to liabilities. For this purpose they call back, on the eve of the preparation of the balance-sheet, the amounts lent on call or at short notice on the understanding that they may be re-lent the next day. These efforts at putting up a good show are called '*window dressing*'.

7. **Usefulness of Banks**. It should be clear by this time that the banks are extremely useful, nay indispensable, for a modern community. "Bankers are the custodians and distributors of the liquid capital, which is the life blood of our commercial and industrial activities ; and upon the prudence of their administration depends the economic well-being of the nation."[1] More concretely we may summarise the uses of banks as follows :

(*i*) They create purchasing power in the form of bank notes, cheques, bills and drafts and thus economise the use of precious metals.

(*ii*) They make money more mobile, by bringing lenders and borrowers together, and by helping funds to move from place to place and from person to person in a convenient and inexpensive manner, through the use of cheques, bills and drafts.

(*iii*) They encourage the habit of saving among the people and enable small savings, which otherwise would have been scattered ineffectively, to be accumulated into large funds and thus made available for investments of various kinds.

(*iv*) By encouraging savings and investment, they increase the productivity of the resources of the country and thus contribute to its general prosperity and welfare.

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nson and Branton—*Economics of Banking, Trade and Finance*, p. 180.

In a word, without the banks the present level of economic development of the world could never be imagined.

Unfortunately, banking facilities in India are extremely meagre and this is one of the reasons why our natural and human resources have not been adequately exploited.

There are special functions of very great importance that are performed by the central bank of a country to the study of which we direct our attention next.

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CHAPTER XXXVI

MONEY MARKET AND CENTRAL BANKS

1. Money Market. We have already seen that in Economics the term 'market' does not refer to a place or locality but to the whole of the region from which the dealers are drawn. But what is a money market ? Who are the buyers and sellers here, and what is it that they buy or deal in ? By the term 'money market' also, we mean not a particular bazar or a square, where most of the bank offices in the city may be situated, but a group of exchangers. The exchangers or dealers are the borrowers and lenders and the commodity dealt in is money. The borrowers are the purchasers of money. The sellers are the lenders of money. The price of money means the rate of interest at which money is borrowed or lent. The lenders are generally the banks (who of course borrow, too, in the form of deposits from the public) and the borrowers from the banks are the discount houses, bill accepting agencies, financiers and other business men. Some of these in turn lend to others.

In Crowther's words, "The money market is the collective name given to the various firms and institutions that deal in the various grades of near-money."[1] Bank deposits and bills of exchange are examples of near-money. They are not as generally acceptable as money proper is.

2. The Constituents of the Money Market. Who constitute the money market or who are its members ? We have already hinted in the definition of the money market given above as to who constitute the money market. The membership of the money market consists of bankers, brokers, discount houses and financiers. At the top of all is the central bank which is its watchdog and controller.

The constituents of the Indian money market are: the Reserve Bank of India, the State Bank of India and the other joint-stock banks, exchange banks, co-operative banks, land mortgage banks, the government postal savings banks and the indigenous bankers. There are two distinct sectors of the Indian money market : the indigenous bankers form the one, and the modern banking institutions the other.

The Indian money market is imperfectly developed and weakly organised. The indigenous bankers who account for nearly 90 per cent of the banking transactions stand aloof. There is no coordination between the two sectors. Hence the Reserve Bank's power to control credit is strictly limited. There is a multiplicity of rates. Seasonal financial stringency used to be a common phenomenon. Another outstanding feature of the Indian money market is the absence of a well-developed bill market. Commercial banking dominates the money market and facilities for industrial finance and long-term credit are very meagre. The habit of hoarding and the general absence of banking habit are serious obstacles in the way of proper development of the money market in India.

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[1] *An Outline of Money*, 1950, p. 66.

3. **Central Bank**. A central bank is an institution which is responsible for safeguarding the financial stability of a country. It holds the ultimate reserves of the nation, controls the flow of purchasing power—whether currency or credit—and acts as a banker to the State.

In recent years, the importance of central banks has enormously increased. This has been due to various causes: the growing interdependence of economic life within and between countries; the greater necessity of management and control of currency system; the post-war (1914-18) confusion in currency and exchange matters; the Great Depression and the realisation that control over supply of money through central banks could avoid to a large degree cyclical fluctuations; and the element of planning and regulation that has been introduced in the economic systems of various countries in recent years. All these have increased the importance of an institution which could co-ordinate, control and manage the various complicated and conflicting factors, economic and financial, which affect the economic stability in the national and international field.

4. **Reserve Bank Balance Sheet.** The Reserve Bank of India is India's central bank and the keystone of the money market arch. It publishes a weekly return. In England, the Bank of England return is considered the barometer of the money market. This is so because the London money market represents a closely knit and thoroughly integrated system. But this is not the case in India. Hence the Reserve Bank of India return cannot truly be called the barometer of the Indian money market.

The Reserve Bank return, issued weekly, is split up into two: the return relating to the Issue Department and that relating to the Banking Department. The Reserve Bank return for the week ending on May 1, 1959, was as on page 410.

Let us understand these items. Take the *Issue Department* first.

The total notes issued are a liability of the Issue Department. When a demand is made, it must undertake to convert them into cash. Whether these notes are in circulation in the public or with its own Banking Department (*see* Liabilities side) it must hold itself liable for these notes. They are legal tender and the bank can use them to meet its liabilities. But these very notes are a liability of the Issue Department, because it can be called upon to pay cash for them.

The total note issue (liabilities side) is fully covered by the reserve shown on the assets side. This reserve (assets side) is a composite thing. It is composed of two sorts of assets: (*i*) Gold coin and bullion and sterling (or foreign) securities; and (*ii*) rupee coin and rupee securities. These are the securities of the Government of India as the sterling securities are the securities of the British Government. According to the Reserve Bank Act, 1935, gold coin and bullion in the reserve was to be at least worth Rs. 40 crores. But according to the amending Act of 1956, it has to be worth Rs. 115

RESERVE BANK OF INDIA

Statement of Affairs for the week ended 1st May, 1959

ISSUE DEPARTMENT

Liabilities	Rs.	Rs.
Notes held in the Banking Department	27,52,86,000	
Notes in circulation	1751,10,70,000	
Total Notes issued		1778,63,56,000
Total Liabilities		1778,63,56,000

Assets	Rs.	Rs.
A. Gold Coin and Bullion-		
(*a*) Held in India	117,76,03,000	
(*b*) Held outside India	..	
Foreign Securities	178,00,89,000	
Total A.		295,76,92,000
B. Rupee Coin		132,05,85,000
Government of India Rupee Securities		1350,80,79,000
Internal Bills of Exchange and other commercial paper		..
Total Assets		1778,63,56,000

BANKING DEPARTMENT

Liabilities	Rs.	Rs.
Capital paid up	5,00,00,000	
Reserve Fund	80,00,00,000	
National Agricultural Credit (Long-term Operations) Fund	25,00,00,000	
National Agricultural Credit (Stabilisation) Fund	3,00,00,000	
Deposits :—		
(*a*) Government—		
(1) Central Govt.	53,28,01,000	
(2) Other Govts.	22,44,05,000	
(*b*) Banks	83,70,47,000	
(*c*) Others	118,05,68,000	
Bills Payable	15,70,96,000	
Other Liabilities	45,05,15,000	
		RUPEES 451,24,32.000

Assets	Rs.	Rs.
Notes	27,52,86,000	
Rupee Coin	6,08,000	
Subsidiary Coin	3,84,000	
Bills Purchased and Discounted—		
(*a*) Internal	..	
(*b*) External	..	
(*c*) Govt. Treasury Bills	5,10,27,000	
Balances held abroad*	25,21,30,000	
Loans & Advances to Govts.†	39,39,24,000	
Other Loans and Advances	75,96,77,000	
Investments	264,97,71,000	
Other Assets	12,96,25,000	
		RUPEES 451,24,32,000

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*Includes Cash and Short-term Securities.

† Includes Temporary. Overdrafts to State Governments. The item "Other Loans and Advances" includes Rs. 10,47,04,000 advanced to Scheduled banks against usance bills under Section 17 (4) (c) of the Reserve Bank of India Act.

crores. In the balance sheet given here it is equal to Rs. 117·76 crores. Another old provision relating to the reserve was that gold and sterling securities must be at least 40% of the total reserve. According to an amendment in 1957, foreign securities have been reduced to a minimum of Rs. 200 crores. In this Statement, they are Rs. 178·00 crores. This shows that the position is very sound.

Banking Department. The most important item on the liabilities side consists of Deposits. We notice that they are mostly public (*i.e.*, Government) deposits and deposits from Scheduled Banks. Others mean miscellaneous liabilities, *e.g.*, undistributed salaries of the staff or any other amount which has not been adjusted, for example, a remittance from the State Bank of India.

'Other Liabilities' mainly comprise capital, reserve fund, and profit and loss account.

On the assets side, we find notes, rupees and subsidiary coins. 'Bills Discounted' means that the bank has paid the holders of bills the present worth of the bills after deducting discount. When the bills mature, the bank will realise cash, and hence these bills are its assets. 'Balances held abroad' means the amount it keeps in foreign banks. 'Other Loans and Advances' mean the amount it has advanced to Scheduled Banks and provincial co-operative banks. Investments are the Government securities and the Treasury Bills it has purchased. 'Other Assets' correspond to 'Other Liabilities' and include the same items. It also includes items like furniture, fixtures and fittings, stationery and other property owned by the bank.

Central Banking Principles. The principles on which a central bank is run are quite different from the ordinary banking principles : (*i*) An ordinary bank is run for profits. A central bank, on the other hand, is primarily meant to shoulder the responsibility of safeguarding the financial and economic stability of the country. " The guiding principle of a central bank," says De Kock, " is that it should act only in the public interest and for the welfare of the country as a whole and without regard to profit as primary consideration."[1] Earning of profit for a central bank is thus a secondary consideration. It works under control imposed by the law of the State and is definitely debarred from investing money in risky enterprises.

The central bank is thus not a profit or dividend-hunting institution. It does not act as a rival of other banking institutions. That is why it seldom allows interest on deposits nor can it advance money against the security of immovable property or grant unsecured overdrafts. It is primarily concerned with the maintenance of the solvency of the entire banking system of the country. It must, therefore, keep its own assets as liquid as possible.

(*ii*) The central bank is a reservoir of credit. All other banks and financial houses can look to it for accommodation, of course at a price. But the central bank cannot rely on any other institution to come to its aid and give it cash or take bills and securities off its hands.

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[1] *Central Banking.*

(*iii*) The central bank must follow an active policy. It should not merely be an idle spectator when something goes wrong with the credit machinery of the nation. It must take active steps to remedy the situation. For this purpose it may resort to two weapons: (*a*) the manipulation of the bank rate policy ; and (*b*) the open market operations. Their working is explained in the sections below.

(*iv*) For the efficient discharge of its functions, the central bank is provided with special equipment : (*a*) It is given the monopoly of the note issue. (*b*) It is made a banker to the government. (*c*) It is a banker's bank.

With the position so acquired, it can effectively control currency and credit, and this control is the *raison d'etre* of a central bank.

(*v*) Finally, a central bank should not be subservient to any political party. It must be independent of all political influence, so that it can act freely, without fear or favour, in the best interests of the nation as a whole. However, there is usually very close co-operation between government and the bank.

6. Central Banking Functions. What functions are more characteristically the central banking functions has been a widely discussed question among economists. Hawtrey thinks that it should primarily be the " lender of last resort." Vira Smith stresses the monopoly of note-issue and Shaw regards control of credit as "the one true, but at the same time all-sufficing, function of a central bank." Kisch and Elkins[1] regard " the maintenance of the stability of the monetary standard " as the essential function of a central bank. It is, however, difficult to single out any particular function as the characteristic of a central bank. A recent authority[2] enumerates the central banking functions as under :

(1) The issue of paper currency in accordance with the requirements of business and the general public, for which purpose it is granted either the sole right of note-issue or at least partial monopoly thereof ;

(2) the performance of general banking and agency services for the State ;

(3) the custody of cash reserves of the commercial banks ;

(4) the custody of the nation's metallic reserves ;

(5) the re-discounting of bills of exchange, treasury bills and other suitable paper offered by the commercial banks, dealers and similar financial institutions ;

(6) the acceptance of the responsibility of the lender of last resort ;

(7) the settlement of clearance balances between the banks ; and

(8) the control of credit in accordance with the needs of business and with a view to maintaining the monetary standard adopted by the State.

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[1] *Central Banks* p. 74.

[2] De Kock—*op. cit.*, p. 15.

Broadly put, a central bank acts in the following capacities—

(*i*) As the note- issuing agency.

(*ii*) As the banker to the State.

(*iii*) As the bankers' bank.

(*iv*) As the guardian of the money market, through control of credit.

(*v*) As the lender of last resort.

We shall now proceed to consider these functions in some detail.

7. The Note-Issuing Agency. In the early periods of banking development, almost every bank enjoyed the right of issuing notes. This led to frequent troubles. Notes were over-issued and the resulting inflation disorganized the currency system and brought other serious economic and financial consequences. The government, therefore, had to exercise strict control over the issuing of notes. Gradually the practice of entrusting this important function to the chief bank of the country, the central bank, became established. Now, in almost every country, the central bank enjoys a monopoly in this respect. Such a monopoly is of great importance. It gives uniformity to the system of note-issue. Moreover, the notes of a central bank have greater prestige and even in times of shaken confidence, are seldom presented for encashment into coins or metal. Above all, this monopoly gives the central bank control over other banks in the matter of expansion of credit, since it is the cash reserve which constitutes the ultimate limit of such expansion.

8. Principles of Note-Issue. In the issue of notes, two conflicting aims have to be reconciled. On the one hand, the note-issue must be elastic. The circulation should expand and contract in accordance with the demands of trade. On the other hand, the confidence in the notes must be preserved by maintaining its convertibility. The first is the principle of elasticity, and the second is that of security. This requires a proper regulation of note-issue.

Currency Principle vs. *Banking Principle*. On the eve of the passing of the Bank Charter Act in England in 1844, there was a keen controversy as to what should be the right principle of note-issue. There were two opposing schools of thought, one advocating what is known as the Currency Principle and the other the Banking Principle.

The advocates of the *Currency Principle* insisted on full metallic banking (*i.e.*, 100% reserve). For every note issued, there must be kept in the currency chest coins of the same value. In their opinion, the currency note was merely a convenient and economical substitute for metallic money.

Naturally, the paper currency under this system was absolutely safe. There could never be a question of the currency authority not being able to encash the notes. But this system of note-issue would make the currency highly inelastic. Notes could be issued only to the extent that the note-issuing authority was able to acquire gold or silver to be kept in the reserve. The expansion of currency was thus made to depend on the output of mines rather than on the reasonable requirements of trade, which should be the primary consideration.

Those who advocated the Banking Principle were in favour of leaving the business of note-issue entirely to the discretion of the banks. This would enable them to vary the currency in response to the legitimate needs of trade. Any excess of note-issue would automatically come back to the banks by being presented for cash payment. They held that the banks in their own interest would maintain adequate reserves to honour these notes. No reserve requirements should be laid down by law. In their opinion, the banks could be safely relied upon to regulate the note-issue properly.

The Banking Principle undoubtedly made the note-issue elastic, because the banks were to be given unhampered discretion in matters of note-issue and reserve. But this system of note-issue lacked safety. The banking history of England is full of instances when the lure of profits outran the bankers' discretion. There were numerous bank failures which brought ruin to the banks concerned and thousands of their constituents. From experience, therefore, it may be said that it will not be safe to leave the whole matter in the hands of the ordinary banks.

We thus find that the Currency Principle provides safety but lacks elasticity, whereas the Banking Principle ensures elasticity but is wanting in security. A sound system of note-issue, however, must have both elasticity and safety. Hence all countries have evolved systems each of which represents a compromise between these two principles. Among these we may mention : (*a*) *Fixed Fiduciary Principle or Partial Deposit System* ; and (*b*) *Proportional Reserve System.*

9. System of Note-Issue in Different Countries. In Great Britain, the fixed Fiduciary System was embodied in the Bank Charter Act of 1844 as amended subsequently. Under this system, a given quantity of notes can be issued by the central bank without keeping any metallic reserves. This portion could be covered only by Government securities. This is called the fiduciary limit. Notes issued in excess of the fiduciary limit must be covered pound for pound by gold. This method was attacked from time to time as lacking in elasticity. It, however, acted as a brake on over-expansion of credit. In abnormal circumstances, the fiduciary limit could be raised by amending the Act. In 1928 the Treasury was given power to increase the fiduciary limit beyond the legal ceiling. This gave some elasticity to the system. It was, however, objected that raising of the fiduciary limit was always interpreted as a sign of weakness. Thus it was held that elasticity was imparted but there was loss of confidence. In spite of criticism, the system has survived owing, mainly perhaps, to the force of tradition. Japan and Norway, in fact, have introduced the same system.

The Proportional Reserve System has been adopted on the European continent, France keeping 35% and Germany 40% reserve. With some modification it has also been followed by the Federal System of the U.S.A. "The essential feature of this method, which has now spread over a large part of the world," says De Kock, "is the provision of a proportional metallic reserve against the note circulation (25, 30, 33⅓, 40 per cent), the remainder of the notes to be covered by trade bills and Government securities, with the further provision that, subject to certain conditions and penalties, the reserve ratio may be allowed to drop below the legal minimum."[1] The banks generally keep a 'cushion' above the legal minimum for fear of breaking the law. However, it should be borne in mind that the central bank reserve is not merely intended as a cover for notes issued. "The amount of international currency a country needs does not depend at all closely on the amount of its domestic currency and credit ; it depends on its liability to suffer fluctuations in the balance of external payments." And what is kept as 'cover' is not available for external settlements.

This system is more elastic than the Fixed Fiduciary Principle. If the bank obtains, say, Rs. 40 worth of gold, it can issue Rs. 100 worth of notes under the Proportional Reserve System, but only Rs. 40 worth of notes under the Fixed Fiduciary Principle, once it has exhausted the fiduciary limit. The element of safety, however, is less under this method of issuing notes.

Some people think that if the State issues notes, as was done in India until the Reserve Bank of India took over this function, the note-issue can be better controlled. But in times of emergencies the notes will be over-issued whether the State does it directly or indirectly through its influence over the central bank. In fact, note-issue by a central bank is slightly better from this point of view, since there may be some resistance by the central bank to the proposals of the Government to use the method of printing additional notes for its finance.

So far as India is concerned, the Reserve Bank of India has the monopoly of note-issue. For this purpose, the Reserve Bank, like some other central banks (*e.g.*, the Bank of England), maintains a separate department called the Issue Department. The assets of this department are kept distinct from those of the other departments of the Bank, the Banking Department.

The assets of the Issue Department consist of silver, rupee coins, Government of India (rupee) securities, gold coins, gold bullion, or sterling securities, provided that the amount of gold coin and gold bullion was not at any time less than Rs. 40 crores in value and gold bullion and sterling securities must be at least 40% of the total reserve. With the sanction of the Central Government, the 40 per cent limit could be reduced for limited periods on payment of a specified tax on the deficiency. Thus the system adopted in India was a compromise between the two systems discussed above. In 1956, however, the proportional reserve system was replaced by the fixed minimum reserve : A minimum holding of foreign securities worth Rs. 400 crores and of gold of Rs. 115 crores was prescribed. In 1957 it was cut down to Rs. 200 crores including gold worth Rs. 115 crores.

As the experience of World War II has shown, this particular method of regulating note-issue has not been able to save India from inflation. The very provision (keeping of sterling backing) which was meant to act as a brake on over-issue was the cause of the enormous inflation of currency that has taken place. India was paid in sterling for the various war materials purchased in India on behalf of the British Government and its Allies. This sterling was transferred to the Issue Department of the Reserve Bank in London and corresponding amounts of currency notes were issued in India. This led to an enormous expansion of note-issue while the letter of the law was fully honoured. The extent of inflation that took place will be clear from the fact that notes in circulation increased from Rs. 182 crores on 1st September, 1939, to Rs. 1,218 crores on 4th January, 1946. Correspondingly, sterling securities held in the Issue Department of the Reserve Bank increased from Rs. 59 crores to Rs. 1,110 crores over the same period.

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[1] De Kock—*op. cit.*, pp. 28-9.

10. Banker of the State. The second important function of a central bank is to act as a banker to the Government. All the balances of the Government of the country are kept with the central bank. On these balances usually the bank pays no interest. On the other hand, the bank performs a number of services to the Government. Generally speaking, it is the fiscal agent of the Government, and advises the latter in matters relating to currency and exchange as well as finance. "Central banks everywhere operates as bankers to the State not only because it may be more convenient and economical to the State, but also because of the intimate connection between public finance and monetary affairs."[1] As the various financial activities of the State can interfere with the conditions of the money market, the exchange rates, and credit policy of the central bank, the banking operations of the State are best entrusted to the central bank.

An important function of the central bank with respect to the State is the provision of short-term loans. This is usually done through the central bank discounting the Government Treasury Bills either directly or when presented by other banks. This is to enable the Government to meet its current financial obligations in anticipation of its revenues. During times of crisis like war, such lendings to the Government can lead to serious inflation as happened in the case of France, Germany and elsewhere in Europe during and after the war of 1914-18. "History is full of examples," says De Kock, "of inflation and currency depreciation resulting from credit creation on behalf of the State. In fact, experience has shown that heavy government borrowing either directly from the central bank or indirectly through rediscount, is the easiest means, and sometimes the only means, of bringing about substantial inflation."

When a central bank gives advances to the Government against treasury bills or other government securities, the money spent by Government is again deposited with commercial banks by those who receive payments. This, in fact, means an increase in the commercial banks' balances with the central bank which, as we have seen, are as good as cash. On the basis of this cash, the commercial banks are able to increase their loans and advances. Thus inflation starts. It is, therefore, necessary that the central bank should be kept independent of the State so that it may be able to resist the latter's pressure for credit. In view of the disastrous consequences of government borrowings in some countries during and after World War I, some newly-established central banks (Chile, Czechoslovakia, South Africa and India) were restricted by law in the matter of granting accommodation to the government. But such restrictions had to be relaxed in periods of emergency.

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[1] De Kock—*op. cit.*, p. 64.

The Reserve Bank of India performs several functions as the banker to the State. It accepts money for account of the Central Government and the State Governments and makes payments up to the amount standing to their credit respectively. It carries out their exchange, remittance and other bank operations, including management of the public debt.

As regards advances to the State. the Reserve Bank has not been restricted with regard to such advances. But they must be repaid within three months from the date of making the advance. The bank can also buy government securities of any country, provided the amount of such securities held at any time in its Banking Department does not exceed the aggregate amount of the share capital of the Bank, the reserve fund and three-fifths of the deposit liabilities of the Banking Department, and provided further, that securities maturing after one year or after 10 years shall not exceed certain limits.

11. The Bankers' Bank. Broadly speaking. the central bank acts as a bankers' bank in three capacities : (*i*) As the custodian of the cash reserves of the commercial banks ; (*ii*) as the lender of last resort ; and (*iii*) as a bank of central clearance, settlement and transfers.

(*i*) The habit of the commercial banks of keeping their cash reserves with the central bank developed slowly and it has been closely associated with the functions of the central bank as the bank of issue and banker to the Government. It was convenient to keep cash reserves with the central bank because its notes commanded the greatest confidence and government's banking transactions took place through this institution. Originally, keeping of cash with the central bank was optional ; later on in most countries it was made a statutory obligation.

The practice has many advantages. First, it economises cash. The nation's cash can be more effectively used when centralised than when scattered in the vaults of numerous banks. Secondly, it enables the commercial banks to increase their reserves merely by discounting bills with the central bank in times of need instead of having to rely upon their own resources. Thirdly, it gives the central bank control over the credit policies of the member-banks as we shall presently see.

In India the scheduled banks (so called because their names are included, on the basis of their paid-up capital and reserve, in the Second Schedule to the Reserve Bank Act) are required to maintain with the Reserve Bank a balance of not less than five per cent of their demand liabilities and not less than two per cent of their time liabilities. At present there are about 100 Scheduled banks.

(*ii*) The central bank is the lender of last resort to the commercial banks. When the commercial banks have exhausted their own resources and have failed to supplement their funds from the usual outside resources, the central bank is called upon to function as the lender of last resort. It acts in this capacity mainly through its rediscount operations.

In the narrow sense, rediscounting is applied only to first class trade and agricultural bills brought to the central bank by commercial banks and bill dealers or brokers, who are temporarily in need of funds and want to convert some of their short-term assets into cash. In the wider sense, as now current in most countries, rediscounting is defined as " the conversion directly or indirectly of commercial bank credit into additional central bank credit."[1] Rediscounting is thus applied also to Treasury Bills and to short-term collateral loans to banks and other financial institutions made by the central bank against bills or promissory notes and government securities.

Rediscounting facility enables commercial banks to carry on their day-to-day business on smaller cash reserves, since they can always rely upon the central bank in times of crises. It gives increased elasticity and liquidity to the assets of the commercial banks. Rediscounting, however, should not be abused. It should be only resorted to in times of emergencies and not in times of normal business activity. The central bank in its turn should be ready to help in times of distress, but should be less liberal in ordinary times. This is necessary to encourage self-reliance among commercial banks and to conserve the strength of the central bank for emergencies. The mere fact that they can get help from the central bank in times of emergencies is enough to maintain the confidence of the public in the commercial banks.

(*iii*) The central clearing function is performed by all central banks. In some countries, it is merely a matter of tradition or convenience, in others it is a duty imposed by law. This is a logical step from the position of the bank as custodian of cash reserves of the commercial banks. Since banks keep cash reserves with the central bank, settlements between them can be easily effected by means of debits and credits in the books of the central bank. In many countries, separate clearing houses are set up to cancel mutual obligations between the banks, including the central bank. In such countries, the balances ultimately to be paid can be paid without cash transfers through mere book entries in the accounts of commercial banks with the central bank. If clearings go heavily against some bank, its cash balances with the central bank will fall below the prescribed or traditional limit. In such a case, the bank concerned can rediscount with the central bank for a few days until the deficiency in the balances is made up.

This method of settling accounts, apart from being convenient, is economical as regards the use of cash. It also strengthens the banking system by reducing withdrawals of cash in times of crises. Moreover, it enables the central bank to be well-informed about the state of liquidity being maintained by the commercial banks with regard to their assets. This information helps the central bank in its function of controlling the credit expansion in the country.

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[1] De Kock—*op. cit.*, p. 106.

12. The Control of Credit : The Objectives. A central bank controls credit with the following objects in view :—

(*a*) To safeguard its gold reserves against internal and external drains ;

(*b*) to maintain stability of internal prices ;

(*c*) to achieve stability of foreign exchanges ; and

(*d*) to eliminate fluctuations in production and employment.

The necessity of safeguarding gold reserves arises under a gold standard. In a gold standard country, gold can be freely imported and exported and the currency of the country is convertible by law into gold coin or gold bullion. In such a country an over-expansion of credit causes inflation. High prices at home first lead to withdrawal of more cash from the banks and gold from the central bank to carry on transactions at a higher level. This is called the "internal drain". Secondly, the home price-level being higher than the international price-level, imports are encouraged and exports discouraged. An unfavourable balance of trade is created which has to be met by export of gold. This is called the " external drain ". Gold may also move out because the foreign investors have lost confidence in the future of the currency under question and they begin to withdraw their funds. The central bank, therefore, must take steps to contract credit, bring prices down and stop the internal and external drain of gold.

The second object is to maintain stability of internal prices. We have already referred to the various disadvantages of fluctuating prices. Price instability causes disturbances in economic relations, maladjustments and serious social consequences. The central bank by regulating the supply of purchasing power, according to the needs of the people, can reduce such fluctuations to a large extent.

Instability of foreign exchange (value of foreign money in terms of home money) disturbs international trade.

There has been considerable controversy as to which of the two objects, internal price stability or exchange stability, should the central bank pursue, when both cannot be attained at the same time. If all the countries concerned are on gold standard, stabilization of internal prices by all the countries will automatically keep exchanges stable within narrow limits.[1] Up to the Great War of 1914, therefore, the various countries kept stability of exchanges without serious disturbances in the price-levels.

During periods of inconvertible paper currencies, however, it was found that price-levels in different countries moved in different directions resulting in great disparities. Under such circumstances, a country aiming at exchange stability had to let its internal price-level fluctuate in response to foreign prices. This seriously upset the whole internal economy of that country. In recent years, therefore, the central banks have aimed more at the stability of internal prices and let foreign exchange adjust itself as necessitated by circumstances. Other things being equal, a country with greater interest in foreign trade (*e.g.*, England) would pay more attention to stability of exchange and a country with relatively small foreign trade (*e.g.*, India) would concentrate more on internal stability. One of the criticisms of the currency and exchange policy of the Government of India in the past was that the latter paid more attention to exchange stability and less to the stability of internal prices.

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[1] *See* " Specie Points."

A more recent view rejects the aims both of exchange stability and of internal price stability. This view has come out of the experiences of the great world depression of the 'thirties. It is held that the central bank should aim at smoothing out the business cycle, which does not result merely from price movements. No doubt steadiness in internal prices and foreign exchange are both desirable, but they should be subservient to maintaining the stability of economic life as a whole. The aim should be to maintain a normal steady growth of business activity and prevent booms and slumps. Regarding the adequacy of the banking policy in this regard, Crowther remarks, " Banking policy will never be sufficient by itself to bring economic utopia into being. Its first task should be to prevent the natural instability of a complex credit system from increasing the amplitude of economic fluctuations. Its second task should be to attempt deliberately to offset some of the causes of disturbance that are beyond its control. But for those causes themselves we must look outside the realm of money.''[1]

For a long time the economists held the view described by Hawtrey as " the inherent instability of bank credit''. According to this view, the banks accentuated the cyclical fluctuations. The bank credit expanded during inflation exerting further inflationary influence and it contracted during deflation and exercised deflationary influence. Prof. Whittlesey[2] has, however, shown that the bank deposits may now be expected to behave in a more stable manner. This is due to the altered composition of the assets of the commercial banks. Formerly, the bulk of their assets consisted of commercial paper which is more volatile. But since the Great Depression, more especially since the Second World War, there has been a shift in the assets of the banks. Their holding of commercial bills has decreased and that of government securities has increased which is a much more stable element.

In the U.S.A., in 1945, government securities represented 75% of the earning assets of commercial banks. After the end of the war, the holding of commercial paper increased, but even then in 1948 Treasury obligations were 55% as compared with 10% in 1929. Owing to this change in the composition of the earning assets of the commercial banks it may now be anticipated that the bank credits (or deposits) will not be so unstable and may, on the other hand, exercise a stabilizing influence on economic life.

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[1] Crowther—*op.* cit., p. 201.

[2] Whittlesey, C. R.—The *American Economic Review*, December 1949, pp. 192-98.

13. Difficulties of Credit Control. Even if one or more of these objectives are desired by the central bank, there are serious difficulties in the way of their achievement. In the first place, there are difficulties in the way of controlling credit itself. Secondly, even if the bank is able to control the volume of credit, the objectives concerned may not necessarily be achieved. Several difficulties in the way of controlling credit may be noted.

First, bank credit is not the only form of credit. There is commercial credit like book credit, bills of exchange and promissory notes (not discounted by banks). Over these the central bank has little control. They are as much purchasing power as any other form of credit.

Secondly, even as regards bank credit, all banks of the country do not have direct relations with the central bank. In the U.S.A., for instance, one-half of the commercial banks with one-fifth of resources are outside the Federal Reserve System. In India, the indigenous bankers, accounting for 90% of the banking business in the country, are still beyond the influence of the Reserve Bank.

Thirdly, even if all banks were member-banks, commercial banks may not always co-operate with the central bank and may not follow its lead. Such co-operation, as we shall see, is indispensable for a successful control of credit.

Fourthly, there are non-banking elements in the financial structure of a country. Among these are the various circumstances that affect the temper of the business community. These are beyond the scope of central banking action.

Finally, the central bank cannot control the ultimate use to which credit may be put. Strictly commercial loans, for instance, may be used for speculative purposes.

This, however, does not mean that any attempt to control credit on the part of the central bank is bound to fail. These are the limitations to which the action of the central bank is subject.

Even if the bank can control credit, it does not necessarily follow that the objectives of the bank like price stability, exchange stability, etc., will automatically follow. There are difficulties in their way too, which have been discussed elesewhere.

Now we proceed to discuss the methods of credit control. These are :—(*i*) Bank rate policy, (*ii*) open market operations, (*iii*) credit rationing, and (*iv*) other methods.

Let us take these in turn.

14. The Bank Rate Policy. The *bank rate* is the rate at which the central bank of a country is willing to discount first class bills. It is thus the rate of discount of the central bank, while the ***market rate*** is the rate of discount prevailing in the money market among the other lending institutions. Since the central bank is only the lender of the last resort, the bank rate is normally higher than the market rate. The term '*rate of interest*' is the rate which the commercial banks pay to those who keep deposits with them. The banks' *call rate* is the rate at which money is advanced for very short periods to bill brokers, etc. In a perfectly developed money market, all those rates bear a more or less constant relationship with each other. Before World War I, for instance, in England the banks usually fixed their deposit rate 1½ per cent below the bank rate. The call rate was fixed usually ½ per cent above the deposit rate to enable the banks to have a margin of profit between what they charged and what they paid. The banks charged about 1% above the bank rate on advances to their customers, subject to a minimum of 5 per cent. The relationship between the bank rate and the market rate of discount was determined by the conditions of the money market.

Under such conditions, therefore, if the bank rate was changed all the other rates normally moved in the same direction, though this did not always happen as we shall see.

In countries where the money market is not so well organised, the relationship between the bank rate and the other rates is not so close. To that extent, therefore, the central bank is unable to influence these other rates by changing its own rate of discount.

Theory of Bank Rate Policy. According to theory, the changes in the bank rate of the central bank are followed by corresponding changes in all the local money rates. If the bank rate is raised, the market rates and other lending rates of the money market also go up. Conversely, the market rate of discount and the other rates go down when the central bank lowers its bank rate. These changes affect the supply and demand for money. Borrowing is discouraged when the rates go up and encouraged when they go down. In the former case, a contraction of credit, and in the latter its expansion, is the result. The flow of foreign short-term capital is also affected. There is an inflow of foreign funds when the rates are high and an outflow when they are low. Internal price-level tends to fall with the contraction of credit and it tends to rise with its expansion. Business activity, both commercial and industrial, is stimulated when rates of interest are low, and discouraged when they are high. An adverse balance of international trade can be corrected through lowering of domestic costs and prices by contraction of credit, since this stimulates exports and discourages imports.

Bank Rate Policy under Gold Standard. The theory of this policy is specially adapted to gold standard. It operated most successfully, therefore, in Great Britain before 1914. Under gold standard, an adverse balance of trade is indicated by movement of exchange to the gold export point and outflow of gold. This may be due to excessive export of capital or excessive import of merchandise. Conversely, when the balance of payments[1] is favourable, there is an inflow of gold.

In the case of outflow of gold, the primary cause may be relatively high domestic cost of production. This would discourage exports and encourage imports. Or it may be due to over-investment of capital in foreign countries caused by fear regarding the future of the home currency or other factors ; or speculative influences may be at work.

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[1] For " Balance of Payments " *see* Ch. XXXIX.

Under such conditions, raising of the bank rate led to contraction of credit. This was followed by greater sale of commodities and securities since their holding became more costly due to higher rates of interest, fall in domestic demand due to fall in the incomes of various groups, decline in new investment and speculation, lowering of prices and wages. The ultimate result was encouragement of exports, inflow of foreign capital, discouragement in the withdrawal of foreign capital, etc. In due course equilibrium was restored. The outflow of gold stopped. If the policy was continued long enough, there would be inflow of gold, thus relieving credit stringency, lowering money rates and reviving busines activity.

Thus the raising of the bank rate has two effects : (*i*) *immediate* and (*ii*) *ultimate*. *Immediately*, borrowing is discouraged as the discounting of bills becomes a costly affair. Money, therefore, does not leave the banks. Instead, funds flow in even from abroad as the raising of the bank rate is followed by the raising of the bankers deposit rate. *Ultimately*, prices fall through contraction of credit and currency. Exports are stimulated and imports are checked. The balance of trade becomes favourable and gold tends to flow in. The objective of raising the bank rate is thus achieved, *viz.*, drain of gold out of the country is checked and, instead, gold comes in.

Conversely, if there was a continued inflow of gold, the central bank would lower the bank rate. This would cheapen money and encourage expansion of credit, trade, production, investment and speculation. It would raise domestic prices and costs, encourage imports and discourage exports. Investment in foreign countries would be encouraged. If the policy is continued long enough, an adverse balance of payment would arise and gold inflow would be changed into outflow.

Limiting Conditions of Bank Rate Policy. For a successful working of such a policy, a little reflection will show that a number of conditions have to be satisfied :

(*i*) All the other rates should follow the bank rate in its movement so that credit should expand and contract as the case may be.

(*ii*) The economic structure of the country should be elastic so that changes in credit conditions should lead to corresponding changes in wages, rents, production, trade etc.

In a well-organised money market like that of Great Britain the first condition is satisfied.

In Great Britain, as we have seen, all the other rates have a more or less constant relationship with the bank rate as a matter of convention. Sometimes, however, when surplus funds are available in the money market, the bank rate may fail to be effective and other methods may have to be used. In most other countries, this condition is not satisfied to any appreciable degree. Hence the meagre success of the bank rate policy there.

As regards the second condition, again, conditions in Great Britain were most favourable, especially before 1914. The economic structure was appreciably elastic. Wages, rents and production responded within limits to changes in money rates and credit conditions. In subsequent years, the British economic structure considerably lost its old elasticity. This was due to various reasons among which were the breakdown of the gold standard and coming in of the managed currency and regulation of wages and prices.

As regards other countries, the bank rate policy was always much less successful due to the absence of the above two conditions. In recent years, this particular method of credit control has become secondary even in Great Britain. The decline in its relative importance is due to changes in money market conditions and the greater rigidity of the economic system as already noted. As regards the money market, several developments may be noted. Domestic trade is financed now more through bank overdrafts and less through bills of exchange which play an important part in discounting operations. Foreign bills have also lost a good deal of their importance due to the fact that London no longer enjoys the same financial status as it used to before the war of 1914-18. This has reduced the volume of foreign bills offered for discount in London. Moreover, short-term Treasury Bills have taken the place of bills of exchange for short-term investments. This has increased the influence of the Treasury over the money market. Such changes are not conducive to the smooth working of the bank rate policy.

15. Keynes' View of the Bank Rate Policy. According to the late Lord Keynes, the traditional theories of bank rate concentrated largely on the influence of bank rate as a means of regulating the quantity of bank money and of protecting a country's gold reserves. It had not taken account of the influence of bank rate on the rate of investment relatively to saving, and the influence of changes in the relation between investment and saving on prices, production, employment and wages.

Keynes criticized Hawtrey who had emphasized investment but only one particular kind of investment, namely, " investment by dealers and middlemen in liquid goods, to which," said Keynes, " a degree of sensitiveness to changes in bank rate is attributed which certainly does not exist in fact."[1] According to Keynes, economic situation is affected not through the changes in short-term rate of interest and in the stocks of working capital goods, but through the long-term rates of interest and the volume of fixed capital goods. Changes in the bank rate lead to changes not only in short-term rates of interest, but also in long-term rates, since the last two are interconnected. Changes in long-term rates affect the investment market. This investment depends upon prospects of profits and the long-term interest. Assuming the prospects of profits to be the same, the higher the long-term interest, the less attractive become investments or replacements of existing capital. When entrepreneurs spend less on fixed capital goods, employment in the capital goods trades declines. This leads to contraction of total money incomes and a decrease in expenditure on current consumption. This results in the decline of employment in consumption goods trades. Prices and production fall all around. Conversely, when the rates of interest fall, the opposite is the result.

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[1] *A Treatise on Money*, Vol. 1, p. 193.

In his General Theory, etc., Keynes emphasised the importance of equilibrium between saving and investment for general economic stability. He is, however, of the view that apart from regulation of quantity of money through open market operations (to be studied presently) such equilibrium should be attained, not by the bank rate policy but by the State directly organizing investment and starting public works in periods of depression. Keynes regarded bank rate policy as an out-of-date method of controlling credit.

The bank rate policy, however, has not yet gone completely out of use, though its relative importance has been much reduced. It is still an instrument for correcting wrong trends and restoring equilibrium through its influence on the supply of, and demand for, money. Whether it acts through affecting short-term interest rate and investment in liquid goods, as Hawtrey holds, or through long-term interest rates affecting investment in capital goods as contended by Keynes, is a matter which is difficult of verification. Interest, moreover, is only one of the elements of cost whether the investment is in liquid goods or in capital goods. The state of trade and prices is affected by several factors. It should also be remembered that the explanations of the process given by Hawtrey and Keynes are not mutually exclusive. A change in bank rate may lead to changes in holding of stocks as well as in investments in fixed capital goods. The difference is only of emphasis.

16. Open Market Operations. *The Theory*. The term 'Open Market Operations' in the wider sense means purchase or sale by a central bank of any kind of paper in which it deals, like government securities or any other public securities or trade bills, etc. In practice, however, the term is applied to purchase or sale of government securities, short-term as well as long-term at the initiative of the central bank, as a deliberate credit policy. This method of credit control has attained great importance during the last two or three decades.

The theory of open market operations is this. The sale of securities leads to contraction of credit and the purchase thereof to credit expansion. When the central bank sells securities in the open market, it receives payment in the form of a cheque on one of the commercial banks. If the purchaser is a bank, the cheque is drawn against the purchasing bank. In both cases the result is the same. The cash balance of the bank in question, which it keeps with the central bank is to that extent reduced. With the reduction of its cash, the commercial bank has to reduce its lendings. Thus credit contracts. When the central bank purchases securities, it pays through cheques drawn on itslf. This increases the cash balances of the commercial banks and enables them to expand credit. '*Take care of the legal tender money and credit will take care of itself*' is the maxim.

This method is sometimes adopted to make the bank rate policy effective. If the member-banks do not raise their rates following the rise in the bank rate, due to surplus funds available with them, the central bank can withdraw such surplus funds by the sale of securities and thus compel the member-banks to raise their rates. Scarcity of funds in the market compels the banks directly or indirectly to borrow from the central bank through rediscounting bills. If the bank rate is high, the market rate cannot remain low.

Limitations of the Theory. It is obvious that the above will be valid only if certain conditions are satisfied. These conditions are :—

(*i*) The theory is that when the central bank purchases securities, the cash reserves of the member-banks will be actually increased, and conversely, the cash reserves will be decreased when the central bank sells securities. This, however, may not happen. The sale of securities may be offset by inflow of gold into the bank or by return of notes from circulation and hoards. The purchase of securities, on the other hand, may be accompanied by an outflow of gold or withdrawal of notes for increased currency requirements or for hoarding. In both the cases, therefore, the cash reserves of the member-banks may remain unaffected.

(*ii*) But even if the cash reserves of the member-banks are increased or decreased, the banks may not expand or contract credit accordingly. The percentage of cash to credit is not rigidly fixed and can vary within quite wide limits. The banks will expand and contract credit according to the prevailing economic and political circumstances and not merely with reference to their cash resources.

(*iii*) The third condition is that when the commercial banks' cash resources increase, the demand for loans and advances should increase too, and *vice versa*. This may not happen. Due to economic or political uncertainty even cheap money rates may not attract borrowers. Conversely, when trade is good and prospects of profits bright, entrepreneurs would borrow even at high rates of interest.

(*iv*) Finally, the circulation of bank credit should have a constant velocity. But the velocity of bank deposits is rarely constant. It increases in periods of rising business activity and decreases in periods of depression. Thus a policy of contracting credit may be neutralised by increased velocity of circulation, and *vice versa*.

In spite of these limitations, however, there is a fairly close relationship between the sale and purchase of securities by the central bank and contraction and expansion, respectively, of bank credit.

Since for the success of market operations it is necessary that there should be broad and active market in short and long-term government securities, and such markets exist only in the U.S.A. and Great Britain, this method of credit control has been most effectively used in these two countries.

In Great Britain especially, this method has been widely used with the objects of making bank rate effective, counteracting the effect of seasonal movements of funds, offsetting the inflow and outflow of gold and creating and maintaining conditions of cheap money and in the interest of business.

17. Credit Rationing. Credit rationing means restriction placed by the central bank on demands for accommodation made upon it during times of monetary stringency and declining gold reserves. The credit is rationed by limiting the amount available to each applicant. Further, the central bank restricts its discounts to bills maturing after short periods. This method was used by the Bank of England till the end of the 18th century when the usuary laws prohibited raising of discount rate beyond 5 per cent. After the critical period following World War I, credit rationing has been adopted as a policy by a number of countries like Russia and Germany.

This method of controlling credit can be justified only as a measure to meet exceptional emergencies because it is open to serious abuses.

18. Other Methods. The other methods of credit control may be noted only briefly. There is what is called ' direct action.' This implies coercive measures like refusal on the part of the central bank to rediscount for banks whose credit policy is not in accordance with the wishes of the central bank or whose borrowings from the central bank are excessive in relation to their capital and reserve. The central bank may, on the other hand, request and persuade member-banks to refrain from increasing their loans for speculation or non-essential activities. Law may also authorise the central bank to impose a change in the minimum of cash reserve on the member-banks. Changes may also be imposed by law on the margin requirements on security loans. Finally, the method of publicity is also used. This means issuing of weekly statistics, periodical review of the money market conditions, public finances, trade and industry, the issue of weekly statement of assets and liabilities in the form of balance sheets, etc.

On the central bank's power to control credit, Crowther concludes thus : " There are thus limits on the central bank's ability to control the volume of money in existence in the country. But they are broad and elastic limits...Over the quantitative aspects of money in a modern state the control of the central bank is very great. To the question, ' What determines the quantity of money in existence ?' the answer is, ' The policy of the central bank, using its free discretion within limits that are normally very broad...In its own field the central bank is clearly a dictator.' "[1]

19. Lender of Last Resort. It is the duty of the central bank to meet demands for cash at times of emergency. When panic prevails among the public and people's confidence has been shaken, when other banks are shifting for themselves, the central bank boldly steps forward to supply cash and allay panic. Only a central bank can meet such situations of high liquidity preference. For this purpose, there is generally a provision in the constitutions of central banks to issue notes in excess of what is permissible according to law.

We may add here that the Reserve Bank of India has proved a successful central bank. This can be seen from its role in improving agricultural finance, bank reforms, help to banks in distress, co-ordinating indigenous banks with modern banks, etc.

20. Nationalisation of Central Banks. In the last few years, many central banks have been nationalised. Prominent among the recently nationalised banks are the Bank of England and the Reserve Bank of India.

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[1] *An Outline of Money*, 1950, p. 58.

In favour of nationalisation, it may be said that these banks are already regarded as public institutions. They are meant to promote national interests rather than the interest of the shareholders. A maximum limit is imposed on the dividends that the central banks can declare. The shareholders get just as much as the investors in government securities get. Thus in fact central banks are more or less national institutions. When they are so in fact why not make them so in law ?

Secondly, the government will be in a position to act more expeditiously and firmly in national interest without in any way being hampered by the consideration of the shareholder's interest. The directors will no longer represent private individuals but will be nominated by the government. As representatives of the shareholders, they have certain susceptibilities which have to be respected. But as nominees of the government, their outlook will be entirely different. They will be able to bring to bear a single-minded devotion to the furtherance of national interests.

Thirdly, as the central bank pays no interest on deposits, it makes enormous profits. If the bank is nationalised all these profits go to the community at large rather than to a private body of shareholders.

Fourthly, the central bank is mainly concerned with the government business, *e.g.*, collection of taxes and other dues, disbursements, and raising and management of government loans. It supplies currency which is particularly a government's function. It is a matter of great national importance that the currency supplied to the public should be sound. It is, therefore, only in the fitness of things that the bank should belong to the government.

Fifthly, the business of the central bank is of a routine nature and is a monopoly. It, therefore, easily lends itself to State management.

Finally, in these days socialism is in the air. Nationalisation of the central bank will be a step in this direction and will meet the wishes of a large mass of the people.

The opponents of nationalisation point out the dangers of bureaucracy. It is said that banking is a commercial enterprise and must be run strictly on business principles and this the permanent State officials will be incapable of doing. Promotion is by seniority and their tenure is permanent. They lose all initiative and incentive for better work. They are tied down by red tape.

Further, banking business is of a very technical nature and as such beyond the understanding of an average minister. He will, therefore, be completely at the mercy of the permanent officials.

It is also pointed out that nationalisation is unnecessary because already the central banks are run in purely national interests. The shareholders only receive practically a fixed dividend which after all is not much. But the greatest danger of nationalisation is that the central bank may be made a pawn in the game between political parties. An unscrupulous ministry may use it as a tool for promoting party ends as distinguished from the interests of the nation as a whole. " The perfect central bank," says Crowther, " would have the duty of nearly always swimming against the current of public feeling, alternately over-optimistic and over-despairing. State control that attempted to ensure that the policy of the central bank should always be popular with democratic electorate would consequently be a disaster." Again, " Ultimate Government control there must be, and the precise point on the gradation from ultimate control to day-to-day interference at which central bank's independence begins is a matter of expediency rather than of principle."

On the whole, we may say that the nationalisation of central banks has justified itself and the dangers seem to have been generally exaggerated.

21. International Bank for Reconstruction and Development. When the Second World War was over in 1945, the need for economic reconstruction was urgently felt. Political measures alone would not apply the balm unless measures were also adopted for economic reconstruction. In order to thrash out the problems created by the war, several international conferences were held, *e.g.*, the I. L. O. at San Francisco, the I. T. O. at Havana and the Brettonwoods Conference. With the labours of this last conference were born the twin sister institutions *viz.*, the International Monetary Fund and the International Bank for Reconstruction and Development (I. B. R. D.).

The main purpose for which the I. B. R. D. was established was to assist in the reconstruction of the economics of the war-devastated nations and in the development of backward areas. With this object in view, the bank is intended to provide long-term finance as distinguished from the short-term finance which is provided by the I. M. F. It can extend long-term credit not only out of its own capital but also out of funds that it can raise by the issue of bonds. These bonds are readily subscribed because they have behind them the guarantee of all the member-countries. Besides these, the bank can guarantee loans granted by private parties on a charge of ½ or 1% commission. This encourages capital investment abroad on private account.

Not only has the bank been able to bring about a smooth transition from a war-time to peace-time economy, but it is also calculated to help in raising productivity and standard of living and conditions of labour in the territories of the member-nations. No doubt the bank gives priority to credits for reconstruction of the economies that suffered during the war, yet the development projects of the backward countries are also receiving assistance in an increasing measure. The Bank's assistance in the ultimate settlement of the huge lend-lease and reverse lend-lease accounts and in the maintenance of equilibrium in the balance of payments accounts is indeed very valuable. It will also be helpful in re-establishing world commercial relations on a stable multilateral basis.

Sixty eight leading nations of the world (except the U.S.S.R.) have become members of the Bank and the total subscribed capital is nearly 9 billion dollars of which the share of the U.S.A. is nearly one-third and India's quota is $400 million. The quotas of other important member-countries are : the U.K.—$100 million, China—$600 million, France—$450 million. The member-countries were called upon to pay 20% of their quota. Of the 20% subscription, each member-country had to pay 18% in its national currency and 2% in gold or U. S. dollars.

With the assistance of the bank, the member-countries can fully utilise their available resources in raw materials, transport facilities, fuel, power, plant, idle manpower, existing technical and managerial skills, etc. and thus attain not merely pre-war but higher output levels. The backward areas of the globe—Asia, Africa, India and the Latin America—can now create new productive facilities or expand the existing ones.

The operations of the Bank are conducted on sound business principles, and the loans are granted on a "good risk" basis. The granting of loan is preceded by a thorough investigation into the economic conditions and all other relevant aspects of the economy of the intending borrower. The bank authorities do not merely satisfy themselves about the soundness of a project which it is asked to finance but of the economic and financial conditions of the country itself. For this purpose, it is not satisfied merely with documentary evidence but sends out missions to conduct on-the-spot inquiry and to obtain first-hand information. The Bank is not prepared to lend unless it is satisfied (*a*) that the over-all economy of the borrowing country was soundly operated and that both policy and practice gave grounds for confidence that satisfactory conditions would be created at an early date, if the country was passing through some difficulties ; (*b*) that the over-all plans for reconstructing and developing economy were well conceived and were being worked out on lines which would reinforce the basic soundness of economy ; and (*c*) that the project or projects within the larger programme which the Bank was asked to finance had been meticulously prepared technically and were financially and economically justified.

It is of primary importance for the borrowing country to keep a constantly critical eye on the soundness of its budget structure ; on the existence of a healthy and stable relationship between wages and prices ; on the effective utilisation of its available resources of materials, transport and power ; on the flow of goods within its borders and the volume and character of exports and imports passing across them ; on the development of its balance of payments ; and on all diverse aspects of national life which reflect the health of its economy.

The way in which the Bank worked was explained by Mr. Hoar, the Vice-President of the Bank, who came out to India in 1949 in connection with a loan that she had applied for. He said that the Bank was not so unrealistic as to expect perfection, but what it did expect to find was a realistic appraisal of facts and a determined and intelligent policy to move steadily forward to set right those features which were hindering the healthy evolution of its economy. As for the financing of a particular project, he suggested that no commit-ment should be entered into for any project until (*a*) it had been proved to fit into the general pattern of sound development; (*b*) it had been proved to be necessary ; (*c*) it had been proved to be feasible ; (*d*) it had been proved capable of doing the job within the time-limits within which results were essential and more satisfactory than any alternative ; (*e*) it had been related to other competing and complementary projects ; and (*f*) a balance had been struck and evaluated as to the benefits of employing competent consultants, contractors and engineers.

In its brief career, the I.B.R.D. has already granted several important loans. Its first big loan of $250 million was given to France. The next lot of loans aggregating $ 263 million was for the Netherlands, Denmark, Luxemberg and Chile. A loan of $34 million was advanced for electric power development in Mexico. In 1957 fiscal year, the bank granted 20 loans to 15 countries amounting to $387·86 million as against $ 396·5 million in 1950-51 covering 26 loans to 20 countries. In ten years (1947-57), the Bank advanced 170 loans amounting to $3,107 million to 45 countries and sent out a number of technical missions. The periods of loans run from 15-20 years and the rates vary between 2½% and 5½% plus one per cent commission to be credited into the Bank's special reserve. In the beginning nearly all the loans were devoted to raising agricultural production and providing basic utilities in less developed countries. Lending for industry has been comparatively small. In 1957, the major purpose of the loans was electric power development to which more than one-third of the Bank development loans are now devoted. For industry also loans are being stepped up. It must, however, be admitted that the Bank's resources are inadequate to cope with the work of financial reconstruction of the war-torn countries and for the development of under-developed countries.

So far as India is concerned, the International Bank gave a loan of $34 million for railways primarily for the purchase of locomotives, $10 million for agricultural development and for the purchase of agricultural machinery to enable the Central Tractor Organisation to clear large areas of land of a deep-rooted weed called *kans* grass and $18·5 million for the execution of river valley projects. A number of technical missions were sent by the Bank to examine these projects. A Bank mission visited India in late 1951 to gain first-hand knowledge of the planning, financing and execution of the development programme set forth in the First Five-Year Plan. In May 1951, the Bank's representatives discussed possible assistance to the Industrial Finance Corporation for providing medium and long-term credit to industry. In June 1952, a member of the Bank staff came out to study the plans for completion of an integrated power development scheme in the Damodar valley. Another Bank mission visited India to study technical and financial problems of the iron and steel industry with a view to expanding iron and steel production. The Bank has also interested itself in the Indus River Project which will be highly beneficial both to India and Pakistan. In 1957, India obtained $20·00 million for industry, $5·60 million for Air Lines and $9·80 million for Power. The total assistance received by India up to the end of June, 1957 amounts to $168 million.

India ranks third among the leading borrowers of the world. No better testimony is required for India's credit-worthiness among the nations of the world.

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CHAPTER XXXVII

THEORY OF INTERNATIONAL TRADE

1. Why Separate Theory of International Trade. So far we have been concerned with the problems arising out of exchange of goods and services within the same country. Now we turn to the study of the problems that relate to the exchange of goods and services between persons living in different countries.

It should be noted that the difference between internal trade and international trade is only one of degree, not of kind. The fundamental principles in both cases are the same. International trade, like the home trade, is the result of division of labour. In the internal trade, people specialise in producing goods in which they have a greater comparative advantage ; the same thing happens in international trade.

There are, however, several differences between the home trade and foreign trade which necessitate the formulation of a separate theory of international trade :

First, within the same country, labour and capital are more mobile than they are between different countries. There are various reasons for this difference. As regards labour, as Adam Smith puts it, "Of all sorts of luggage man is the most difficult to be transported." Several causes are responsible for this ; difference of language traditions, religion, customs, social and political life, etc., or mere inertia may keep them at home. Capital is more mobile than labour. But even here people prefer to invest their savings in their own country for various reasons. An investor feels a greater sense of security if his capital is invested in his own country.

The result of this comparatively greater immobility of labour and capital between different countries is that competition fails to make costs of production of similar goods equal, as it does in the same country. This gives unequal advantages to different countries in the production of different commodities. The different countries become non-competing groups. There is another consequence of comparative immobility of labour and capital as between one country and another. Within a country, the price of a commodity, in the long run, tends to approximate to its cost of production. This is so because labour and capital can easily move into or move out of an industry, if the price is respectively more or less than the cost of production. This cannot happen in the case of international trade. Labour and capital being immobile, price and cost of production can seldom approximate.

Secondly, differences in advantage may arise because of natural causes like geographical and climatic conditions. These lead to territorial division of labour and localization of industries. For instance, some countries may have particular mineral resources like coal, iron ore, copper, etc. Others may have land or climate peculiarly suitable for certain crops, *e.g.*, jute in Bengal. Either these advantages cannot be transferred to other countries at all or the cost of moving them is prohibitive.

Thirdly, in international trade certain problems arise out of the fact that countries are independent sovereign States and can pursue independent policies with respect to the movement of goods, money matters, wages and prices, fiscal matters, banking law, foreign loans, etc. Several kinds of restrictions may be placed on the movement of goods beyond their frontiers by the States.

All these causes give rise to a separate theory of international trade.

2. Theory of Comparative Costs. The theory of comparative costs was applied to international trade at first by Ricardo. He pointed out that while profits in the same country in different employments tended to equalise. this was not the case as between different countries. The reason is that there is mobility of labour within a country but not between different countries. By an arithmetical example, he showed that even if Portugal could produce both cloth and wine cheaper than England, it would pay Portugal to concentrate on the production of wine only in which her comparative advantage was greater and import cloth from England. J.S. Mill pointed out that between the limits set by the comparative costs, the terms of exchange were determined by the relative strength of demand of one country for the goods of the other, provided at the position of equilibrium imports just paid for the exports.

J.E. Cairnes questioned Ricardo's assumption that factors of production were mobile within the same country and not at all between different countries. On the whole, however, he agreed that even though non-competing groups existed within the same country, the mobility of the factors of production was sufficient for profits to tend to the same level. This did not happen as between different countries. The classical theory was thus completed with Cairnes. It was believed that while within a country commodities exchange in the ratio of their cost of production as between countries the reciprocal demand was the determining factor.

Though the classical theory is accepted in its essentials by modern economists, certain modifications have occurred both in the matter of emphasis and also as regards its manner of illustration. These modifications are worth noting :

(*i*) The classical economists measured costs in terms of days of labour. The modern writers state the theory in terms of the marginal costs of production as expressions of the degree of relative scarcities of the factors of production.

(*ii*) The Ricardian theory assumed constant returns. The modern writers have elaborated this simplified version by indicating the influence of the laws of increasing and diminishing returns. Thus if the increased scale of production reduces costs per unit, the comparative advantage will be increased. If, on the other hand, the larger output raises cost per unit the comparative advantage may diminish or even disappear.

(*iii*) The Ricardian theory did not explain the terms of exchange. Early Ricardians, following Adam Smith relied upon the "higgling" of the market, a rather vague term. According to modern analysis, the ratio of exchange is determined by the elasticities of the demand of each country for the products of the other.

In the light of the above modifications, let us illustrate the Theory of Comparative Costs in its modern version.

All trade takes place because of the differences in the cost of production. Such differences can be of three types :

(*i*) Absolute differences in cost,
(*ii*) equal differences in costs, and
(*iii*) comparative differences in costs.

Trade is possible under (*i*) and (*iii*) but not under (*ii*). Let us take examples :

(*i*) *Absolute differences.*

In country A { Marginal cost of producing wheat is Rs. 5 per md.
  „ „ „ cotton is Rs. 10 per md.
In country B { Marginal cost of producing wheat is Rs. 10 per md.
  „ „ „ „ cotton is Rs. 5 per md.

Since price tends to equal the marginal cost of production, in country A one maund of wheat will exchange for ½ maund of cotton. In country B, one maund of wheat will exchange for 2 maunds of cotton.

		Cost ratio
Thus in country A	: 1 wheat=½ cotton	1 : 2
and „ „ B	: 1 wheat=2 cotton	1 : ½

Thus A has absolute advantage in wheat and B in cotton. A will specialise in the production of wheat and B in cotton. A will gain so long as she can get more than ½ maund of cotton for a maund of wheat. B will gain so long as she can get a maund of wheat for less than 2 maunds of cotton. The ratio of exchange will lie somewhere between ½ md. and 2mds. of cotton for a maund of wheat. The actual rate will depend on the relative elasticities of the demands of each party for the product of the other. This we shall examine later.

Trade due to absolute advantages usually exists between temperate and tropical countries on account of climatic and other differences.

(*ii*) ***Equal differences.*** When the comparative advantage is equal, no trade can permanently take place between the parties.

Thus :

In country A { Marginal cost of producing wheat is Rs. 5 per md.
  „ „ „ „ cotton is Rs. 10 per md.
In country B { Marginal cost of producing wheat is Rs. 4 per md.
  „ „ „ cotton is Rs. 8 per md.

		Cost ratio
Thus in country A	: 1 wheat=½ cotton	1 : 2
in country B	: 1 wheat=½ cotton	1 : 2

Under the above conditions, no benefit will accrue to the parties through specialisation. If A specialises in wheat and B in cotton, A can only gain if 1 md. of wheat gives her more than ½ maund of cotton. But B will not give more than ½ maund of cotton for one maund of wheat, since she can produce that much at home by transferring productive resources from cotton to wheat. Even if trade starts, it will come to an end after some time as explained earlier.

(*iii*) *Comparative differences in costs.* When the comparative advantage is different, trade will arise and it will continue.

In country A { Marginal cost of producing wheat is Rs. 7 a md·
,, ,, ,, ,, cotton is Rs. 14 a md·

In country B { Marginal cost of producing wheat is Rs. 5 a md.
,, ,, ,, ,, cotton is Rs. 7 a md.

In this case, country B can produce both wheat and cotton cheaper than country A. But the comparative advantage is higher in the production of cotton than in that of wheat. On the other hand, A has a comparative disadvantage in the production of both the commodities but the disadvantage is lower for wheat than for cotton.

Thus :			*Cost ratio*
Country A	:	1 md. of wheat=½ md. of cotton	1 : 2
B	:	1 md. of wheat=5/7 or ·71 md. of cotton	1 : 1⅖

It will, therefore, pay country B to specialise in the production of cotton and A in wheat.

It is not to be supposed that the production of cotton in A and wheat in B will altogether cease. The theory of comparative costs refers to *average* cost only. If *every* cotton farm in B has lower cost than *every cotton* farm in A, and if every wheat farm in A had lower costs than *every* wheat farm in B, then only no cotton will be produced in A and no wheat in B. But this is very unlikely. There must be some cotton farms in A whose costs are lower than some cotton farms in B. Hence some cotton will still be produced in A and some wheat in B.

What will be the terms of trade ? B will gain as long as she can get a maund of wheat by parting with less than ·71 md. of cotton. A will gain as long as she can get more than ·50 maund of cotton by parting with a maund of wheat. The rate of exchange will lie between

1 md. of wheat = ·50 md. of cotton.
1 md. of wheat = ·71 md. of cotton.

The actual rate will depend upon the relative elasticities of demand of each party for the goods of the other.

If the demand of A for cotton is more elastic than the demand of B for wheat, the rate of exchange will be more favourable to A. This is so because A will be less anxious for cotton than B is for wheat. In the opposite case, the rate of exchange will be more favourable to B.

When the rate of exchange is favourable to A, it is nearer the 1 md. of wheat=·71 md. cotton limit. When the rate is favourable to B, it is nearer the 1 md. of wheat=.50 md. of cotton limit.

The margin of gain in this example is quite narrow. In actual practice, trade will arise if the margin is fairly wide to counterbalance any inconveniences involved in such a trade. The argument here relates to two countries, but it can be extended to cover more than two commodities and two countries without contradicting the essential principle.

Such is the theory of comparative costs. Then where exactly does the difference lie in its application to foreign trade ?

We have said in the beginning that all trade arises because of differences in costs. In the case of the same country, there is a tendency for differences in comparative costs to disappear on account of the comparative ease with which the factors of production move from employments with lower rewards to those with higher rewards. Commodities thus tend to exchange within the same country according to their respective marginal costs of production. This adjustment does not take place between countries due to immobility of the factors of production. Thus arise permanent differences in comparative costs which make international trade profitable as explained above.

But such differences in comparative costs may arise between different regions of the same country due to the lack of mobility of the factors of production between those regions. Thus "non-competing groups" may exist within the same country. In that case, the theory of comparative costs will apply to home trade as well. It is due to this that modern economists deny that international trade requires a special theory to explain its emergency and operation. But since differences in comparative costs are more characteristic of different countries than of the regions in the same country, special notice is taken of this theory while discussing trade between nations.

We may sum up the theory of comparative cost in general terms. An individual is able to perform many tasks but he does not perform all. He selects that work which pays him the most. A doctor can also do the dispensing but he does not do it ; a lawyer can perhaps type, but he does not do it ; a professor can teach his son reading in a school but he does not do it. All these people find it to their advantage, and it is also to the advantage of the community, that the inferior work is left to inferior persons. In that case, time and energy are more profitably employed.

The same principle works in international trade. Considering climatic conditions, distribution of mineral and other natural resources, geographical position and physical configuration, every country seems to be better suited for the production of certain articles rather than for others. It will be to the advantage of each country, as well as to the advantage of the world as a whole, that each country specialises in the production of those commodities for whch it has greater *relative* advantage. In that case, the productive resources of that country will be more remuneratively employed. Among the factors that determine the commodities in which a country should specialise, we may mention the rate of exchange, the monopoly element, transfer costs, prices of the factors and their relative efficiency. A country would tend to specialise in the production of those commodities in which transfer costs and factor prices are low but productive efficiency is high.

It is generally seen that the commodities are produced where the cost of production is the least. But this fact in itself does not lie at the basis of international trade. Rather, this principle of comparative cost implies that a country may specialise in the production of certain commodities and import certain other articles, even though it can produce them at a lower cost. England imports dairy products from Denmark although their cost of production in England is less. The reason is that England is able to get much better return from labour and capital employed in other directions, say machinery, and the loss from the purchase of cheese and butter is more than made up. " The theory of comparative costs as applied to international trade is therefore that each country tends to produce not necessarily what it can produce more cheaply than another country, but those aricles which it can produce at the *greatest relative advantage* i.e., *at the lowest comparative cost.*"

Like other economic laws the principle of comparative cost also is a statement of a tendency. In actual practice, the operation of the theory is hindered by frictional influences such as differences in language, custom, religion and above all the unwillingness of labour and capital to be guided by purely economic considerations. They are also influenced by political motives, commercial practices and general security. The cost of transport and the behaviour of the cost of production are the other limiting factors. Specialisation tends to increase the scale of production, but if the industry is subject to the law of increasing cost, the principle of comparative cost will cease to function.

Case of a backward country. What will happen if a country happens to be so economically backward that it can supply nothing to the world, that the only capacity in which it can enter the world trade is that of a buyer ? There is no such possibility in the real world. Every country, however backward it may be, will be in a position to supply something. Generally in such a country wages will be low, the price level is bound to be low too so that it is worthwhile for other countries to buy something from this country. Normally the rate of exchange comes to be settled at a level at which it is found economical for a country to import commodities in the production of which its relative disadvantage is the greatest and export those in which it is the least. Hence one-way traffic in the world of reality will be a rare phenomena, say non-existent.

While explaining the theory of comparative costs we referred to the money costs of production. But ultimately, money costs merely reflect the exchange relations between goods that lie behind them. What are then the real costs ? For Ricardo, real costs were labour costs. Cost of production, however, consists of several factors.

Costs that determine exchange relations are essentially opportunity or relative costs. These costs arise because resources in a country are scarce in relation to the demand for them. If the resources are used for one purpose, they have to be withdrawn from another purpose or alternative use. Now suppose that, in a certain country to obtain a maund of wheat, resources have to be withdrawn from the production of cotton so that 1¼ maunds of cotton is to be sacrificed. In that country, therefore, 1 maund of wheat costs 1¼ maunds of cotton. The ratio 1 : 1¼ is the ratio of costs between the two commodities. We can term this as comparative cost ratio or opportunity cost ratio or substitution cost ratio, because this indicates the rate of substitution of one commodity for another.

These substitution ratios are likely to differ from one country to another. This is because different factors of production are found in different degrees of scarcity in different countries. If factors could move freely from one country to another, these degrees of scarcity would have tended to equalise. But since, due to reasons already noted, the factors are not so mobile between countries, these differences remain and hence create more or less permanent difference in comparative cost ratios. Thus international trade is rendered possible.

3. **Why International Trade is Competitive.** According to the theory of comparative costs, each country tends to specialise in the production of those commodities in which it has got the greatest relative advantage. Each country will have its own separate sphere of productive activity. Such specialisation should lead to co-operation rather than competition, each country supplying its specialities to the other. But we find that actually there is often cut-throat competition in the international field leading to better international rivalries and then wars. It was Japan's industrial and commercial superiority that made England and America hostile to her. What then is the explanation ?

In the first place, as we have already said above, the principle of comparative costs is a mere statement of a tendency whose operation is thwarted by frictional influences. This theory is based on the assumption of free trade which does not exist. Economic nationalism has led to the adoption of various devices like import duties, quota system, exchange control, etc., which hinder free interchange of commodities. Specialisation is, therefore, far from complete, and some competition is natural.

Secondly, comparative advantage is not an established fact recognised and respected by all countries. We seldom attain a position of equilibrium or stability at which we might say that each country has established unquestioned superiority in the production of certain commodities. The fact is that each country is constantly striving to attain a position of superiority ; each country is trying to discover where its comparative advantage lies. Hence some commodities are simultaneously being produced in different countries, and competition is the result.

Finally, on account of the operation of the law of diminishing returns, production of a commodity in a country is stopped after a point. Hence it has partly to be imported. There will naturally be some competition. If the industry had been subject to the law of increasing returns, the sphere of comparative costs would have become wider.

4. **The gain from International Trade.** The gain from all trade, including international trade, arises on account of the advan-

tages of division of labour. Division of labour among different countries arises on account of differences in comparative costs in addition to differences in absolute costs of production. When cost differences are equal, no net advantage accrues. We may take the examples discussed in section 2 to show how this gain emerges under (*i*) and (*iii*) and not under (*ii*).

(*i*) *Absolute differences in costs.* In country A (as is clear from the cost ratios), a unit of productive resources produces either 1 md. of wheat or ½ maund of cotton. In country B, a unit of productive resources produces either 1 md. of wheat or 2½ mds. of cotton. If each of these countries invest two units of productive power without specialisation, the total production will be

In A=1 md. of wheat+½ md. of cotton.
In B=1 md. of wheat+2 mds. of cotton.
A+B=1 md. of wheat+2½ mds. of cotton.

If A produces wheat only and B cotton only, the investment of the same productive resources will give :

A=2 mds. of wheat
B=4 mds. of cotton.

A+B=2 mds. of wheat=4 mds. of cotton.

Thus, by specialisation, the same productive resources can be made to yield a surplus of 1½ mds. of cotton. This is the gain from trade.

(*ii*) *Equal differences in costs.* In the second case, total production without specialization and with specialization is the same.

Without specialization :

A+1 md. of wheat+½ md. of cotton.
B+1 md. of wheat+½ md. of cotton.

A+B=2 mds. of wheat+1 md. of cotton.

With specialization. A producing wheat only and B cotton only:

A=2 mds. of wheat.
B=1 md. of cotton.

A+B=2 mds. of wheat+1 md. of cotton.

(*iii*) *Comparative differences in costs.* In the third case, a surplus arises with specialization.

Without specialization :

A=1 md. of wheat+·50 md. of cotton.
B=1 md. of wheat+·71 md. of cotton.

A+B=2 mds. of wheat+1·21 md. of cotton.

With specialization. A producing wheat and B producing cotton only :

A=2 mds. of wheat.
B=1·42 mds. of cotton.

A+B=2 mds. of wheat+1·42 mds. of cotton.
Surplus=·21 mds. of cotton.

This is the gain from trade.

5. Factors Determining the Size of the Gain. It will be clear from the above analysis that the total gain from international trade depends upon the differences in the cost ratios in the two countries. The larger the range between the comparative costs the greater the total gain. In the words of Harrod :

> " A country gains by foreign trade if and when the traders find that there exists abroad a ratio of prices very different from that to which they are accustomed at home. They buy what to them seems cheap and sell what to them seems dear. The bigger the gap between what to them seems low points and high points, and the more important the articles affected, the greater will the gain from trade be."[1]

As regards the share of this gain accruing to the parties, this will depend also upon the terms of trade, *i.e.*, the ratio in which wheat exchanges for cotton in our example for instance. This ratio, as we have explained, depends upon the elasticities of the demand of one country for the goods of the other, or the intensity of reciprocal demands. Whoever is more keen to purchase or sell will be the loser in the bargain.

The gain from international trade will be shared through the level of money incomes in the countries concerned. These levels also will indicate which country is getting a better bargain. A country will have a high level of money incomes if its goods are in constant demand in the outside world. Increased foreign demand will tend to raise wages in export industries. The prosperity of such industries will affect favourably the wages in other industries too. Competition will compel these other industries to bring their wages to the level of export industries. Failing this, labour will tend to move to industries offering higher wages. Thus all incomes will tend to rise. Though domestic money incomes will thus rise, the prices of foreign goods will be low and people will gain as consumers of foreign goods. Conversely, a country, whose demand for foreign goods is high, will tend to have low money incomes but will have to pay higher prices for foreign products.

6. Terms of Trade. We have said above that the share of a country in the gain arising out of international trade depends on the terms of trade. By 'terms of trade ', we mean the terms at which two countries trade with each other. It refers to the value of a country's exports which have to be given in exchange for its imports. It indicates the rates at which a country exchanges its own goods for that of another. If trade between two countries is such that one is specialising in agricultural production and the other in manufactures, the trade is not advantageous to the former. We might then say that the terms of trade were moving against that country or they are not favourable to it. Similarly, if a country is exporting minerals in a raw state and other raw-materials, the terms of trade are unfavourable to it. Within the limits set by the ratios of comparative costs the actual rate of exchange of domestic goods for foreign goods will depend upon relative intensities of reciprocal demand *i.e.*, country A's demands for B's goods and B's demand for A's goods.

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[1] *International Economics*, p. 34.

The terms of trade can be put in the form of equation as

$$\text{Terms of Trade} = \frac{\text{Value of imports}}{\text{Value of exports}}$$

$$= \frac{\text{Price of imports} \times \text{volume of imports}}{\text{Price of exports} \times \text{volume of exports}}$$

If the volume of imports and exports remain unaltered then the terms of trade will be indicated by the fraction $\frac{\text{Price of imports}}{\text{Price of exports}}$.

In order to understand how the terms of trade may have changed over a period an index number of imports and exports may be prepared. One year may be taken as the base year (=100) and the index for a subsequent year may be worked out. This will give a new fraction which will show how the terms moved as between two countries.

The terms of trade are of great economic significance to a country since they determine the gain that accrues to a country from international trade. If terms of trade move in a country's favour, it will increase gain from its international trade and raise in it the level of incomes. It will be quite the reverse in a country for whom the terms of trade become adverse. Suppose an agricultural revolution takes place in the countries which are markets for our agricultural goods. The result will be that our goods will no longer be in demand or demand for them will be greatly reduced. The growers will suffer and their incomes will fall.

7. **Advantages of Foreign Trade.** We may now refer in a general way to the various advantages that accrue to the countries engaged in foreign trade.

(*i*) There is the advantage which springs from the principle of division of labour as applied to the various countries. Foreign trade enables countries to specialise in the production of those goods for which they are best fitted, or in the production of which they enjoy the greatest advantage. This leads to the production of goods under the most favourable conditions and thus increases the total wealth and welfare of the world.

(*ii*) Foreign trade enables consumers not only to enjoy the products of foreign countries which their own country could never produce, but also to get their requirements from the cheapest markets of the world. The very fact that goods are imported from abroad shows that their price is cheaper than that of similar home products.

(*iii*) During times of famines and scarcity, foreign trade enables the people of a country to maintain their life and health through importation of food from abroad. In the absence of foreign trade, such famines would mean death to millions as it happened in 1943 in Bengal when Burma rice could not come owing to war conditions.

(*iv*) The fear of foreign competition keeps the producers at home up to the mark in their methods of production. Moreover, it tends to prevent monopolies and promotes competition generally. This keeps prices comparatively low for the consumers.

(*v*) By foreign trade, countries which lack essential raw materials can acquire them through imports. This encourages industrial development in lines in which the countries concerned are otherwise well-equipped. Moreover, it leads to utilization of raw materials to the best advantage.

8. Disadvantages of Foreign Trade. The above advantages, however, are counterbalanced, to some extent, by disadvantages.

In the first place, foreign trade may lead to exhaustion of essential materials and minerals of a country, which cannot be replaced. For instance, many of the important materials of India like manganese ore, mica, etc., have been exported from the country more or less in their original state. India has got very little benefit out of them. If they had been conserved, they would have brought better returns when India became industrialised subsequently.

Secondly, foreign trade exposes home industries to outside competition and even to dumping of foreign goods. The decay of the Indian handicrafts during the 19th century seriously disturbed the balance of our economy and increased pressure on land. This happened after the country was exposed to foreign competition by the development of means of communication and transport. The same foreign competition seriously obstructed Indian industrial development on modern lines and thus perpetuated the medieval character of our economy.

Thirdly, foreign trade may adversely affect the consumption habits of a country through the importation of harmful commodities. China suffered a lot on account of the opium trade during the last century.

Fourthly, on account of the operation of the law of comparative costs a country tends to specialise in the production of only a few commodities. This seriously curtails the number of occupations available to the people. Such over-concentration is bad for the stability of a country's economic life.

Finally, foreign trade makes a country's economy seriously dependent upon other countries. If, due to war or any other causes, goods cannot move freely in and out of the country, its economic life may be paralysed. Moreover, any disequilibrium in the field of finance and industry tends to spread to other countries having trade relations with it. The Great Depression of 1929-32 became universalised because of the economic interdependence of the entire world brought about by international trade relations.

On the whole, however, the advantages of foreign trade more than outweigh its disadvantages. Most of the advantages of foreign trade accrue only when goods are allowed to move without any obstruction between the countries. At the same time, free trade also gives rise to most of the disadvantages. It is necessary, therefore, to study more closely the implications of free trade and its opposite policy, protection.

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CHAPTER XXXVIII

FREE TRADE *Vs.* PROTECTION[1]

1. **The Theory of Free Trade.** A policy of no restrictions on the movement of goods between countries is known as the policy of Free Trade. Restrictions placed with a view to safeguarding home industries constitute the policy of protection. In the words of Adam Smith, this term 'free trade' has been used to denote "that system of commercial policy which draws no distinction between domestic and foreign commodities and, therefore, neither imposes additional burdens on the latter, nor grants any special favours to the former."[2] Free trade, however, does not require the removal of all duties on commodities. It only insists that they shall be imposed exclusively for revenue and not at all for protection.

As a practical policy, free trade is based on the theory of international trade already examined in the previous chapter. In the words of Cairnes, "If nations only engage in trade when an advantage arises from doing so, any interference with their free action in trading can only have the effect of debarring them from an advantage."[3] Long before that wrote Adam Smith : "If a foreign country can supply us with a commodity cheaper than we ourselves can produce, better buy it from them with some part of the produce of our own industry, employed in a way in which we have some advantage." He continued further : "Whether the advantage which one country has over another be natural or acquired is in this respect of no consequence. As long as one country has those advantages and the other wants them, it will always be more advantageous for the latter rather to buy of the former than to make."[4] The only exception that Adam Smith would make was, industries necessary for defence. These might be protected since defence is more important than opulence.

The doctrine of free trade is the extension of the doctrine of division of labour to the international field. In the words of Adam Smith again, "Individuals find it for their interest to employ their industry in a way in which they have some advantage over their neighbours." And he adds, "What is prudence in the conduct of every private family can scarce be folly in that of a great kingdom." In short, the free trade theory is that such a policy enables every country to devote itself to those forms of production for which it is best suited on the basis of comparative advantage.

2. **Protectionism.** The term 'protection' is used to denote a policy of encouraging the home industries by the use of bounties or

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[1] Federic Bastiat gives a very interesting satirical account of free trade *vs.* protection controversy in " Petition of the Candlemakers" reproduced by Hess and others in *Outside Readings in Economics*, pp. 738-42.

[2] Quoted by Pelgrave in *Dictionary of Political Economy*, Vol. II p. 143.

[3] *Leading Principles of Political Economy*, Part III, Ch. 5, Sec. I.

[4] *Wealth of Nations*, Book IV, Ch. 2.

by the imposition of high customs duties on foreign products. The object is to build up great national industries even by sacrificing utilities on the part of existing consumers. Political considerations are mixed up with economic ones in the protectionist theory and practice. "The need for maintaining economic independence, the danger of 'invasion' of foreign goods and 'tribute' paid to foreign producers from whom goods are purchased—such are the well-known protectionist pleas which show by their form that they have originated in a time of international conflict."[1] But a still deeper and wider element is the sentiment of nationality. "To the loyal citizen the promotion of native industry and economic interest seem a duty nearly as imperative as the defence of the national territory against invasion." The most powerful arguments in favour of protection are thus political and not economic. "The advantages of diversified industry, of husbanding national resources, or of maintaining certain industries that would disappear under free trade are not believed to be mainly economic."[2]

Probably the earliest statement of the protectionist theory in its modern form is contained in the famous Report on Manufactures (1791) of the American statesman, Alexander Hamilton. He strongly recommended, in this report, encouragement of home industries for greater variety to employment, greater enterprise and in the interests of defence and security of the nation.

Protection appeared in the U.S.A. early in the 19th century for various reasons. Revolutionary and Napoleonic wars caused interference in commerce with England which was the main source of manufactures. In the State of Pennsylvania, a leading school of protectionists arose under the leadership of Henry Carey. Carey supported protection, among others. on the ground that it led to "diversification of employment." He also advanced the argument that the export of agricultural commodities led to the exhaustion of the soil. S N. Patten (1852-1922), another American Economist, used similar arguments in favour of protection. In Germany, Frederich List upheld protectionism on similar grounds. Protectionism in Germany was the child of the nationalist philosophy of that country. List stressed not the wealth of the individual but the good of the State. He criticized Adam Smith on the ground that he was too cosmopolitan ; materialistic and individualistic, and that he ignored the nation, which was the vital link between the individual and humanity. List further argued that what was good for England was not necessarily good for other countries, because of the different stages of their development. He stressed the necessity of diversification of industry. "A nation which only carries on agriculture," he wrote, "is an individual who in his material production lacks an arm."[3]

These ideas passed from the U.S.A. and Germany to industrially backward countries and contain the main arguments in favour of protection. These may now be stated.

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1. Pelgrave—*op. cit.*, p. 234.
2. *Ibid.*
3. *The National System of Political Economy*, p. 130.

3. Arguments for Protection. The main arguments that are usually advanced in favour of protection are discussed below :

(*i*) *The Infant Industry Argument.* J.S. Mill in England accepted only one argument in favour of protection, *viz.*, the infant industry argument. In Mill's words it ran thus : "A protective duty, continued for a reasonable time, might sometimes be the least inconvenient mode in which a nation can tax itself for the support of such an experiment (introducing new industries). But it is essential that protection should be confined to cases in which there is good ground of assurance that the industry which it fosters will after a time be able to dipense with it."[1]

This argument is accepted by most economists. The argument is that if an industry is given a reasonable period to develop unhindered by foreign competition, it will reach maturity and will be able to enjoy the various economies of scale. Ultimately it will be able to stand on its own legs without protection.

This argument specially applies to countries that enter the industrial field at a later stage. Such countries possess potential advantages which may not become effective unless foreign competition is excluded for a period of time.

The argument, however, has not been universally accepted. It is mainly attacked on two grounds : (*a*) that once an infant always an infant. Once protection is given, vested interests are created and it becomes almost impossible to withdraw it. (*b*) that all sorts of industries begin to claim protection once this basis is admitted. The result is political corruption.

In spite of these weaknesses, the argument has been widely accepted and many countries have industrialised themselves through protection given on the basis of this argument, *e.g.*, the U.S.A., several British Dominions, and India.

The advocates of free trade say that free trade is the ideal and protection at best is only a temporary expedient.

(*ii*) *Diversification of Industry Argument.* This argument was advanced, among other writers, by Frederich List in Germany. According to it, a nation should have a variety of sources of production and employment. This is felt to be necessary for keeping a balanced economy. Depending on one industry or on a few industries is dangerous, both politically and economically. Politically it means too much dependence on foreign trade which may be cut off during a war. Economically, a country depending on a few industries is exposed to the danger of serious economic dislocation in case some adverse circumstances affect such an industry. For countries exclusively depending on agriculture, diversification is very essential. Agriculture gives comparatively lower income. The argument applies to India with great force.

But it must be understood that this argument cuts at the root of the principle of comparative cost according to which each country must specialise in the production of certain articles. According to this argument, a country must produce even those articles in which it may not have comparative advantage.

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[1] *Principles of Political Economy*, Book V. Ch. 10 Sec. 1.

(*iii*) *The employment Argument.* It is argued that industrial development through protection increases employment in a country. Conversely, if protection is not given to old established industries, foreign competition may ruin them and create unemployment in the country. The decay of the Indian handicrafts, during the 19th century, as a result of foreign competition, and the resultant unemployment and distress among the artisans, is a case in point. Free traders meet this argument by saying that protection does not increase total employment ; it merely transfers employment to the protected industries at the expense of other industries. Conversely, if due to foreign competition, old industries have to disappear, the people so set free can move to export industries for which the country concerned possesses greater comparative advantage, or migrate to other lands. This reasoning assumes that labour and capital can easily move from industry to industry or from one country to another. In actual fact, due to economic friction, this happens very slowly or may not happen at all. It also assumes that productive resources of the country are already fully employed, whereas in a country like India there is a chronic under-employment of such resources.

(*iv*) *Conservation of National Resources.* Carey and Patten had argued that free trade resulted in the export of agricultural commodities from America and thus led to the exhaustion of the soil. Jevons in England applied the same argument against the export of coal which exhausted coal-fields. The same argument has also been applied in the Union of South Africa regarding goldmining and in India regarding the export of manganese and mica.

The argument has some force. If a country exports its exhaustible materials in a raw state, it loses the manufacturer's profit. It may also be seriously handicapped when such materials have been altogether exhausted.

(*v*) *The 'Defence' Argument.* Adam Smith remarked, "Defence is better than opulence." It is said that it is essential to make a country militarily strong even though it may not be economically prosperous. Hitler preached to the German nation, "Guns are better than butter." According to this argument, a country must actively encourage the development of those industries which are essential from the point of view of defence even though it may result in uneconomic distribution of the national resources.

The advocates of free trade point out that this is politics and not Economics. On purely economic grounds, they say, free trade is the best.

(*vi*) *The 'Revenue' Argument.* Protection is also advocated for revenue purposes. When protective import duties are imposed, they certainly bring in revenue. Customs duties in India have been fairly productive.

But it may be pointed out that there is a certain degree of incompatibility between the revenues and protection. If full protection is given, the government will not get any revenue, because full protection will mean that our goods have driven out foreign goods. When foreign goods do not come in, there will be no revenue from import duty. On the other hand, if we want revenue then foreign goods must come in and compete with our goods. Then our industries do not get any protection. This incompatibility, however, arises between *maximum* protection and *maximum* revenue. But if the duties are moderate, they will yield revenue besides affording protection. It is, however, much better to advocate protection for the sake of protecting industries rather than for raising revenues.

(*vii*) '*Key Industry*' *Argument.* If the industrial structure of a country is to be stable and sound, it must develop 'key' or basic industries; otherwise the foundation of industries will have been laid on sand. The country may not have any comparative advantage in such industries. But since they have to be developed, protection must be granted to them.

(*viii*) '*Patriotism*' *Argument.* Protection is advocated on patriotic grounds also. It is the duty of every citizen to use home-made goods as far as possible. We must, therefore, develop our industries, through protection if necessary, so that home-made goods in the right quantity and of quality are made available for use. There was a widespread Swadeshi sentiment in India in the first decade of the present century which gave Indian industry great stimulus.

(*ix*) '*Self-Sufficiency*' *Argument.* Another argument in favour of protection is that we should become self-sufficient and not depend on other countries for our necessaries. Such a dependence proves very dangerous during war when foreign trade is cut off. This argument has a peculiar force in present times when war clouds are constantly threatening overhead.

(*x*) Protection also becomes necessary against unfair competition from abroad arising from dumping, depreciated exchanges, bounties, etc.

4. Arguments against Protection. Let us now look at the other side of the shield and see if there are any drawbacks in the policy of protection. The usual arguments are :—

(*i*) Vested interests are created. Once certain industries are given protection, they claim it as a matter of right. It then becomes very difficult to take away protection. The 'infants' begin kicking if you touch them in any manner. Such infants refuse to admit that they have grown into adults.

(*ii*) Protection produces lethargy and acts like an opiate. Foreign competition having been removed, it sends the home manufacturers to sleep. They do not try to make any improvements, and technical progress comes to a standstill.

(*iii*) Then there is the danger of corruption. The industrialists bribe legislators so that protection is not taken away. This evil was rampant in America at one time.

(*iv*) Protection creates monopolies. Tariff is said to be the mother of trusts. When foreign competition has been removed, the home manufacturers are tempted to combine to reap monopoly profits. That explains the birth of the Indian Sugar Syndicate.

(*v*) Consumers and unprotected industries suffer. This is so because imposition of import duties invariably leads to the rising of prices.

(*vi*) The distribution of wealth becomes more unequal. Protection favours the rich capitalists who grow still richer. The gulf between the ' haves ' and ' have-nots ' is thus widened still further.

(*vii*) Protection leads to conflict, friction and retaliation in international dealings. It thus breeds the germs of future wars.

(*viii*) The most important argument against protection on economic grounds is that it hampers the international division of labour so that labour, capital and other factors of production are not utilised in the most remunerative manner. Their distribution is not governed by natural economic forces but they are artificially forced into certain channels. The result is that they do not make their maximum possible contribution in the production of commodities. The world output is lower than it could be so that the standard of living is necessarily lowered. A natural movement towards world prosperity is hindered.

To this argument it may be replied that so long as world citizenship does not come into existence, the economically backward countries must safeguard their interests against cut-throat competition from the economically powerful countries.

On the whole, therefore, we come to the conclusion that in theory free trade may be the best, in practice protection is, in some cases, essential, especially in the case of economically under-developed countries like India.

5. Barriers to Foreign Trade. In view of the protectionist sentiment prevailing in economically backward countries, obstacles have been raised in the way of free foreign trade. Obstructions to foreign trade may take various forms. Among these are: (1) Prohibition of imports or exports, (2) exchange control, (3) customs duties, (4) preferential treatment, (5) quotas, (6) import licences, and (7) import monopolies. A few words may be said about each of these.

(1) *Import Prohibition*. Sometimes import of certain commodities is prohibited by law or allowed only under defined conditions. For instance, there are " sanitary regulations." The United States once excluded beef from a certain region in Argentina where foot and mouth disease attacked cattle. Later, the embargo was extended to the whole of Argentina. Sometimes countries indirectly curtail imports by refusing to export certain materials until they have been processed at home. "Rumania did not let her oil go out except on the condition that it be first refined at home, while Hungary will not admit Rumanian oil except on the condition that it be refined after it is received."[1]

(2) *Exchange Control*. Exchange control implies government interference with the buying and selling of foreign exchange. In this way, foreign trade is curtailed and driven into fixed channels. Go-

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[1] B. W. Knight—*Economic Principles in Practice*, p. 344.

vernment may "allot" exchange or ration it out so that importers can buy only a limited amount of goods in foreign countries. Or they may "block" exchange. For instance, an American exporting goods to Germany may be required to use the marks exchange thus obtained in purchasing goods in Germany. Another way is known as exchange "clearing". Thus a German buying goods worth $1,000 from America may be required to deposit this amount in a German bank, while a German selling goods worth $1,000 to an American may draw on the bank for payment. In this way, an attempt is made to carry on foreign trade without the use of foreign exchange.

(3) *Customs Duties.* This is an old method and consists in imposing import or export duties on goods coming into or going out of the country, respectively. Import duties are more common than export duties. A duty is said to be *specific* when it is imposed according to a standard of weight or measurement, *e.g.*, one anna per yard of cloth or two rupees per maund of wheat, etc. The duty is called *ad valorem* when it is imposed according to value, *e.g.*, 10 per cent on motor cars or radio sets.

Customs duties or tariffs may have either revenue or protection as their purpose. To protect cotton industry, an export duty on raw cotton may be imposed to cheapen it for the home manufacturer or an import duty on cotton manufactures may be levied. The latter is the usual method. The revenue duty is for revenue primarily and is levied for the financial year. It may be revised or discontinued in the next budget. The protective duty has greater continuity. Since the intention is to attract labour and capital to a particular industry, it must be levied for a number of years.

(4) *Preferential Treatment.* Sometimes discrimination is made in the rate of duties with regard to different countries. For instance, India gave preferential treatment to certain British goods under the Ottawa Agreement of 1932. India also received preferential treatment in the British markets against non-Empire goods. This is known as *Imperial Preference.* Such arrangements curtail international trade and lead to the development of trade blocs. Moreover, countries whose goods pay higher duties may retaliate and impose high duties on the discriminating country in return.

(5) *Quota Restrictions.* There are two kinds of quotas: "customs quotas" and "import quotas". The first type allows a certain amount of a commodity at a favourable duty; beyond this the normal duty is charged. The limits are settled by agreements, *e.g.*, the U.S.A. does this with the Canadian cream and some other commodities coming under the reciprocal trade agreements. The "import quota" has more serious effect on trade. Here an arbitrary limit is set beyond which imports during a given period are not allowed.

The import duties bring revenue to the State Treasury but under the quota system the difference between the foreign price and the home price, which arises on account of the restricted supply, is pocketed by the importer. The government is, on the other hand, saddled with expenditure incurred in the administration of the quotas. The difference may even go to the foreign exporters, if they hold exporting licences and are strongly organised, whereas there may be a scramble for these goods among the importers.

The quotas are more flexible, as they are subject to administrative manipulation and are not a matter of legislation.

There is another advantage, *viz.*, that under the quota system the quantities to be imported are definitely known and the home manufacturers can regulate their output accordingly. The quotas are not so much resented as the import duties. The quotas are useful as bargaining counters in trade negotiations with other countries. The quotas can be reduced to grant further protection when a trade agreement may preclude the raising of import duties. Further, under the quota system the Most-Favoured Nation clause can be evaded.

The quota system has also several disadvantages. The home market is altogether isolated from the world market. Prices may be falling outside, but they will have no effect on the home market, because the quota is fixed and no goods can be imported beyond the quota. In the case of import duties, changes in the world prices bring about corresponding changes in the home prices. Similarly, if the foreign exporters are able to reduce costs, the home consumer cannot benefit under the quota system, as he would have benefited under a stable import duty. Under the quota system, government suffers a loss of revenue which it could get if it had imposed import duties. Finally, the quota system puts too much power in the hands of administrative officials as against the legislators.

(6) *Import Licences.* Under this system, the government does not allow import of certain goods without a licence being obtained by the importer. In this way, imports can be cut down and certain goods discriminated against.

(7) *Import Monopolies.* The government may make the import of goods a State monopoly, as Russia does, and thus reduce imports or discriminate.

These barriers were extensively used during the inter-war period in the pursuit of economic nationalism by many countries of the world, especially during the Great Depression.

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CHAPTER XXXIX

BALANCE OF PAYMENTS

1. Balance of Trade and Balance of Payments. Whether international trade is free or restricted, it must affect, in the long run, imports and exports of goods and services to the same degree. No country can restrict imports without at the same time restricting exports in the widest sense of the term. Accounts must balance in the long run of countries as of individuals, if they are to survive.

Distinction may be made between the **invisible** and **visible** items of import or exports. When goods, including treasure, are imported or exported, they are recorded at the ports in the trade accounts. They are called visible items of trade. Export and import of services are not thus recorded and are known as *invisible items*.

Balance of trade refers to the value of imports and exports of commodities including treasure or visible items only. *Balance of accounts* or *balance of payments* refers to total debits or credits whether due to visible or invisible items. Debits and credits must balance in the long run although imports and exports of merchandise and treasure need not balance, and they seldom do. When imports are greater than exports (over a year), the balance of trade is said to be adverse, negative, passive or *unfavourable*; and when exports are greater it is positive, active or *favourable*. These terms come from the Mercantilist School of the 18th century England. They regarded excess of exports over imports as favourable, because such a balance brought more gold into the country. What really matters is not the balance of trade but the balance of payments. A country must balance its accounts in the long run. It is in this sense that imports are equal to exports or exports pay for imports. A persistently adverse balance of payments means that the country is heading towards bankruptcy.

A favourable balance of trade in the light of the above does not necessarily indicate that a country enjoys a favourable position in international transactions or that the country is prosperous. In fact, the reverse is more likely to be the case. Great Britain had normally an adverse balance of trade, while India had a favourable balance of trade. But Great Britain is much more prosperous than India. India's favourable balance merely indicated that India had to make more payments in goods to counterbalance the larger payments received in the form of various kinds of services from Great Britain. A favourable trade balance may merely reflect the debtor position of a country. It has nothing to do with wealth or poverty. What really matters is not the balance of trade but the kinds of goods imported and exported. Indian exports have mainly consisted of raw materials and imports of manufactured goods. This indicates her economic backwardness irrespective of the nature of the balance of trade.

It should also be borne in mind that a continuously favourable balance is neither desirable nor feasible. A country cannot go on receiving gold in payment of its excess of exports over imports unless it trades with a gold-producing country and this excess is equal to its annual gold output. In case it is trading with non-gold-producing countries, it can go on receiving gold only so long as their gold reserves last and they are prepared to part with gold. Obviously this is not permanent situation.

2. Items entering Balance of Payments. What constitutes the balance of payments of a country ? Let us enumerate the various items that enter into it.

(*a*) The chief item is the merchandise imported or exported. A comparison of the value of imports and exports gives us the balance of trade as noted above.

(*b*) Next come the invisible imports or exports. Such services may be of various kinds like " transport services, shipping freight, passenger fares, harbour and canal dues, postal, telephone and telegraph fees, commercial services (fees and commissions), financial services (broker's fee etc.) and services connected with the tourist traffic.''[1] Care should be taken that none of these services is counted twice. Thus if an imported commodity is re-exported at an enhanced price, the difference even due to services included in 'invisible exports' will be reflected in the price statistics of imports and exports. In such a case, it should not be counted separately.

The example of invisible imports may be found in the various payments that India had to make to the United Kingdom on account of leave and furlough allowances, pensions and gratuities of all kinds to Englishmen engaged in Indian services, British military personnel in India, British shipping and insurance services rendered to Indians, expenditure of Indian tourists and students in Great Britain, etc.

(*c*) The balance of trade and balance of service are sometimes grouped together and contrasted with what is called the balance of credit. This may consist of interest balance on the one hand, and capital balance on the other.

Interest balance will include fixed interest on Government, municipal and private loans, variable profits and dividends, rents, etc.

As regards the capital balance, distinction should be made between long-term and short-term investments. Long-term capital exports include purchase of shares in foreign undertakings, repayment of loans contracted abroad. Short-term capital exports include any increase in the volume of bank balances held abroad, in the holding of foreign bill, etc.

Before the War of 1939-45, India had to pay large sums to Great Britain as interest on capital invested in Indian railways and canals. The position has been reversed now. India has become the creditor and Great Britain, the debtor. Sterling balances approaching Rs. 1,733 crores were accumulated in favour of India in London. Our credit account has thus become positive.

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[1] Haberler—*Theory of International Trade*, p. 17.

(*d*) Finally, there is another set of items which are included in the balance of payments. Such are Government transactions like salaries of diplomatic representatives, subsidies, reparations, gifts of money such as remittances sent home by emigrants, etc.

These are the main items usually taken into account while striking a balance of payments. The term, however, does not always convey the same meaning. Thus :—

(*i*) Sometimes it refers to the amounts of foreign currency bought and sold within a given period of time. (*ii*) The term may refer to the payments made to, and received from, foreign countries within a specified period. This is not the same as (*i*) above. Payments may be made not only by the purchase of foreign money but by the transfer of foreign money already held. (*iii*) The term is also used in a more restricted sense when it refers to the balance of payments on income account. This will include interest balance, balance of trade and of services. (*iv*) A step further from the above is the concept in the sense of the balance of " international indebtedness " which extends beyond the liabilities falling due within a given period. It represents the total volume of claims and liabilities outstanding at a given moment. (*v*) The greatest significance of the balance of payments arises in connection with its influence on the rate of exchange, *i.e.*, the value of the domestic currency in terms of the foreign currency or currencies. From this point of view it is not sufficient to measure the amount of liabilities outstanding at a given moment or falling due within a given period of time. Here the best method is to apply the supply-and-demand analysis. The value of the home currency in terms of the foreign currency may be regarded as its price. The items included under balance of payments give rise to either supply of, or demand for home currency or foreign currency, as the case may be. "The term balance of payments is then used," says Haberler, "in the sense of the whole demand and supply situation."[1] We shall use the term in this sense when dealing with foreign exchanges.

India's balance of payments for 1956-57 and for the period April-September 1957-58 is given on the next page.

3. Equilibrium of Balance of Payments. When the balance of payments of a country is in equilibrium, the demand for the domestic currency is equal to its supply. The demand and supply situation is thus neither favourable nor unfavourable. If the balance of payments moves against a country, adjustments must be made by encouraging exports of goods, services or other forms of exports, or by discouraging imports of all kinds. No country can have a permanently unfavourable balance of payments, though it is possible—and is quite common for some countries—to have a permanently unfavourable balance of trade. Total liabilities and total assets of nations as of individuals, must balance in the long run.

This does not mean that the balance of payments of a country should be in equilibrium individually with every other country with which she has trade relations. This is not necessary nor is it the case in the real world. Trade relations are multilateral. India, for in-

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[1] Haberler—*op. cit.*, p. 19.

TABLE VI

India's Balance of Payments

1956-57 and 1957-58 (April—September) (Rs. Crores)

	1956—57					1957—58		
	April-June	July-Sept.	Oct.-Dec.	Jan.-March	Total	April-June	July-Sept.	Total (April-Sept.)
1. Imports c.i.f. ...	230·2	246·6	294·0	305·7	1076·5	323·1	299·1	622·2
(a) Private ...	196·1	195·5	209·6	194·7	795·9	201·0	182·5	383·5
(b) Government ...	34·1	51·1	84·4	111·0	280·6	122·1	116·6	228·7
2. Exports ...	153·5	134·8	171·5	177·2	637·0	139·8*	127·3**	267·1
3. Trade Balance ...	−76·7	−111·8	−122·5	—128·5	—439·5	—183·3	—171·8	—355·1
4. Official Donations (net) ...	9·6	8·3	7·6	— 14·3	39·8	5·0	1·5	6·5
5. Other Invisibles (net) ...	22·6	22·1	30·1	32·4	107·2	28·6	22·3	50·9
6. Official Loans ...	4·6	3·3	10·9	37·6	56·4	9·7	18·2	27·9
7. Other Capital Transactions (net)	−1·32	−8·9	15·6	—1·3	—39·0	—43·0	2·5	5·5
8. Drawings on I.M.F. ...	—	—	—	60·7	60·7	34·5	..	34·5
9. Errors and Omissions ...	−7·1	17·7	2·2	—17·4	—4·6	—7·7	23·7	16·0
10. Movement in Foreign Exchange Reserves (Decrease+)	−60·2	+69·3	+87·3	+2·2	+219·0	+70·2	+103·6	+173·8

*Excludes silver despatched to the U.S.A. valued at Rs. 64·8 crores.

**Excludes silver despatched to the U.S.A. valued at Rs. 9·6 crores.

stance, may have an active balance of payments with the United States and passive balance with the United Kingdom and/or other countries. But each country in the long run, cannot receive more value than she has exported to other countries taken together.

Equilibrium in the balance of payments, therefore, is a sign of the soundness of a country's economy. But disequilibrium may arise either for short or long periods. A continued disequilibrium indicates that the country is heading towards economic and financial bankruptcy. Every country, therefore, must try to maintain balance of payments in equilibrium. To know how this can be done involves the study of the causes of disequilibrium.

Causes of Disequilibrium. How may disequilibrium arise in a country's balance of payments ? We have already detailed the various items that enter into the balance of payments. Any cause that leads to a persistently one-sided movement in those items may cause a disequilibrium. For instance, certain causes may lead to a falling off in the export of merchandise, imports remaining unaffected or moving in the opposite direction. Similarly, as regards the other items, falling off in exports may be due to all sorts of causes. Take the case of merchandise for illustration. Our exports may fall because of decreased production due to seasonal factors or other causes. The demand for our goods in the international market may fall off because of a fall in the purchasing power of the consumers of such goods or because of a comparatively high cost of production in India which reduces our competitive strength in the international market. Our exports may become dear to foreigners because of an appreciation of our exchange, a rise in the value of the rupee say from 1*s*. 6*d*. to 1*s*. 8*d*. If we persist in artificially keeping the value of the rupee at a higher level than justified by economic forces (which we shall study in the next chapter), unfavourable balance of trade and of payments will tend to persist.

In the same way, disequilibrium may arise due to excessive imports of services neither balanced by exports, nor by import of capital, etc. Compulsory exports in the form of reparations or indemnities also cause international disequilibrium and obstruct the harmonious trade relations between the countries concerned.

4. How Disequilibrium may be Corrected. When serious disequilibrium arises in a country's balance of payments, steps must be taken to correct it, if the country's economy is to be kept in a sound condition. Obviously, the causes which are responsible for such a state of affairs must be removed. The 'classical' view of the adjustment mechanism is : "An active or passive balance, accompanied by an inflow or outflow of gold, was normally supposed to result in an expansion or contraction of the domestic money supply ; and this expansion or contraction was expected to bring about a rise or fall in the level of domestic costs and prices tending, in the former case, to stimulate imports and discourage exports or, in the latter, to discourage imports and stimulate exports. Gold flows, changes in the quantity of money and changes in relative price levels thus appeared as the principal factors in the mechanism of adjustment."[1] Recent currency experience has, however, led to certain modifications in the classical theory. It is now thought that changes in the flow of income induced by balance of payments serve as an equilibrating factor. "The main point is that any active or passive balance of current transactions...tends directly to expand or contract the total flow of money income within a given country... The changes induced by the balance of payments in the flow of income and outlay affect, in turn, the demand for imported as well as home-produced goods and so react on the balance in an equilibrating manner."[1]

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[1] League of Nations—*International Currency Experience*, 1944, p. 98.

There are five well-known methods of correcting an adverse balance of payments

(*i*) *Stimulating exports* and/or *checking imports*. If the exports have fallen off, steps should be taken to encourage them. To encourage exports the level of costs in the country may have to be brought his may involve cutting down of wages, and interest rates and other incomes and also contraction of currency to bring the prices down.

Exports are also encouraged by granting bounties to manufacturers. Imports may be discouraged either by total prohibition or by imposition of import duties or by adopting the quota system.

(*ii*) Another method is to *depreciate the external* (*exchange*) *value of the home currency*, thus cheapening domestic goods for the foreigner. This atter course, however, has serious limitations, because other countries may start doing likewise and 'competitive depreciation of exchange may start, as it happened during the depression year in the thirties.

It may be noted that the rate of exchange serves as an equilibrating factor between the balance of payments. If, for instance, the demand for American goods increases, the demand for the dollars will increase, and, in the absence of exchange control the price of dollar in terms of foreign currencies will go up. This by itself will discourage the foreign buyers from buying in America and encourage Americans to buy from abroad. In this way, the balance may be restored. Normally it will be so. But if a further rise in the price of the dollar is feared, the foreigners will increase their purchases of American goods now lest they should become dearer still; it will also hold back the Americans from buying more abroad. In this way, the disequilibrium may be accentuated instead of being cured.

(*iii*) The third method is *to deflate the currency*. As currency contracts, prices will fall which will stimulate exports and check imports. But the method of deflation is also full of dangers. If prices are forced down while costs, which are proverbially rigid (especially as regards wages in countries where trade unions are well organised), do not follow suit, the country may face a serious depression and unemployment. Correcting the balance of payments, therefore, once a disequilibrium has arisen, is not an easy matter.

(*iv*) The fourth method is of *devaluation*. Its effect is the same as that of depreciation. When a currency is devalued (*i.e.*, its metallic content is reduced), its value in terms of foreign currency decreases.

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[1] *Ibid*, p. 600.

The result is that foreigners are able to buy in our country more goods than before with the same amount of their currency. This would stimulate exports. But when we want to buy foreign goods, our currency having become cheaper, we have to pay more for them. Imports are thus discouraged and, in course of time, the balance of trade turns in our favour and corrects the balance of payments.

(*v*) Finally, there is the method of *exchange control*. We know that deflation is dangerous ; depreciation has a temporary effect and may provoke others also to depreciate ; and devaluation hits the prestige of a country. These methods are, therefore, avoided and, instead, foreign exchange is controlled by the government. All the exporters are ordered to surrender their foreign exchange to the central bank, and it is then rationed out among the licensed importers. None else is allowed to import goods without a licence. The balance of payments is thus rectified by keeping the imports within limits.

When gold standard was effectively at work in most countries, disequilibria in international payments were automatically corrected to a fair degree. This was before the War of 1914-18. During the inter-war period (1919-39), gold standard was reintroduced during the earlier portion of this period in a modified form and broke down during the Great Depression for reasons already noted by us in another chapter.[1] Gold standard ceased to be automatic and hence ineffective in this connection.

Some economists have recently expressed the opinion that changes in levels of national incomes can restore the equilibrium. Increase in exports, for instance, increases national income which, in its turn, adds to our capacity to purchase from abroad. This means that the imports will also increase and an equilibrium between exports and imports maintained. But modern economic analysis has shown that increase in imports will only partially cover up exports because some portion of national income is bound to leak into domestic savings and not used for imports. Thus change in prices or exchange rate will be essential for full equilibrium.

Recently attempts have been made to evolve a new international machinery for maintaining equilibrium in the balance of international payments and for correcting disequilibrium when it does arise. This new machinery is the International Monetary Fund (I.M.F.), which we shall discuss in the next chapter. It may, 'however, be mentioned here that no country now need be forced into deflation (and so depression) to root out the causes underlying disequilibrium as had to be done under the gold standard. On the contrary, the I.M.F. provides a mechanism by which changes in the rates of foreign exchange can be made in an orderly fashion.

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CHAPTER XL

FOREIGN EXCHANGE

1. **Meaning of Foreign Exchange.** The term foreign exchange may be used in different senses. It may refer to—

(*a*) the rate of exchange, *i.e.*, the amount of money of a foreign country that a unit of the money of the home country will purchase ; or

(*b*) the foreign exchange operations or transactions, *i.e.*, converting one currency into another or the machinery by which foreign payments are made ; or

(*c*) the fund of foreign exchange (currency) at the disposal of a country.

If there were no international trade, there would be no foreign exchange. If there were only one common currency for the whole world, there would then also be no problem of foreign exchange. As it is, countries by their economic relations create mutual obligations which must be met, and the currency of the various countries being different, the problem of converting the currency of one country into that of another arises in international trade.

To take a concrete example : Suppose you import books worth Rs. 100 from England. Indian rupees are of no use to the English bookseller. You must make payment in money which has purchasing power in England. The English money is pound (£) sterling. You must, therefore, convert your Rs.100 into pounds sterling (or titles to pounds sterling). You can also send gold if you are allowed to export it and if you think it worthwhile to bear the cost of its transport. Similarly, a man in England might have purchased tea from an Indian firm. He must convert his pounds sterling into rupees (or titles to rupees), or send gold, if possible and found economical.

At any moment, therefore, in every country there are people who want to make payments to foreign countries and there are others who have to receive payments from foreign countries. The former have imported, and the latter have exported goods or services. Obviously, exports from India are entitled to receive payments from importers in England and importers in India have to make payments to exporters in England. The Indian importers can buy titles to English money from Indian exporters and make payments to English exporters. Similarly, the English importers can buy titles to Indian money from English exporters and make payments to Indian exporters. Thus, in every country, there are buyers of foreign money (or titles to it) and the sellers of foreign money (or titles to it). In other words, there is demand for foreign money and supply of foreign money. Demand for, and supply of, foreign money determine the rate at which foreign money can be purchased (or home currency *sold)* and sold (or home currency purchased). These buyers and sellers collectively constitute the foreign exchange market.

This is, however, a very simplified statement of the theory. In the actual world, exporters and importers do not directly deal with one another. The banks (exchange banks or other banks who also deal in exchange) serve as middlemen. Importers buy titles to foreign money from banks and exporters sell titles to foreign money to banks. The banks make a profit by acting as intermediaries between the two.

2. Titles of Foreign Money. We have yet to explain the nature of what we have called "titles to foreign money". These may take the form of (*i*) Bills of Exchange, (*ii*) Bankers' Drafts, or (*iii*) Telegraphic Transfers. We have already explained what a bill of exchange is and we have also noted its advantages in financing foreign trade. An Indian exporter draws a bill of exchange against the English importer of his goods in terms of pounds sterling. This bill he sells to a bank or, technically, gets it discounted. He is paid the present value of the bill in rupees. An importer of English goods in India buys such a bill by paying rupees and sends it to his exporter in England who gets it discounted at a bank or receives payment from the English importer on the maturity of the bill in terms of pounds sterling.

Drafts, as we have already seen are orders from one bank to its branch or another bank, with which the former may have account, to pay the bearer on demand a specified sum of money. In short, a draft is a cheque drawn by one bank on another in favour of a third person. You can send money to England by purchasing a draft payable in English money. This draft is sent by post to the person to whom the payment is to be made and the latter realises the money by presenting it to the bank on whom the draft is drawn.

A telegraphic transfer is an order by telegram to a bank to pay a specified sum of money to the specified person. It may be called a draft sent by wire. By this method payments are made immediately. Telegraphic Transfer (T.T.) rates are, therefore, more unfavourable to the buyer than rates charged for ordinary drafts.

3. Rates of Exchange. Determination of the rate of exchange requires more explanation [1] We have seen that it is the supply of, and demand for, foreign money that determine the rate of exchange, just as the market price of commodities is determined by the forces of supply and demand. We have also seen how the demand for, and supply of foreign money (or conversely supply of, and demand for, home money) arise. When the supply is equal to demand, the exchange is said to be at par. If supply of foreign money is greater than demand, the value of the foreign money falls below (or of the home money rises above) the par. And conversely, if the demand for foreign money is greater than supply thereof, the value of foreign money rises above (or of the home money falls below) the par. Now only a small fraction of international transaction is settled through the purchase and sale of bills in the foreign exchange markets. It is now mainly concerned with the direct exchange of one currency for another.

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[1] For diagrammatic representation of the determination of rate of exchange *see* Halm, G.N.—*Monetary Policy*, 1946, pp. 141-70.

Up to what limits can the exchange rise above, or fall below, the par ? These limits are determined differently under different conditions. The par of exchange also has different meanings under different conditions.

4. Rates of Exchange under Gold Standard. When the two countries concerned are on gold standard, as already explained, their currency units are either gold coins or are convertible into gold at fixed rates. Moreover, gold freely moves between the countries. The par of exchange between such countries is called the "*mint par of exchange*". This is arrived at by equating the amount of gold contained in the currency units (or given in exchange for them by currency authorities respectively) of the two countries. There can be no mint par between a gold standard and a silver standard country.

For instance, before 1914, England and France were both on gold standard. Their mint par of exchange could be calculated as follows :—

One English Sovereign = 7·98805 grammes of gold 11/12 fine
= 7·32238 grammes of pure gold.
One French Napoleon (20 Francs) = 6·45161 grammes of gold 9/10 fine.
= 5·80645 grammes of pure gold.

Therefore, one Sovereignty $= \dfrac{7{\cdot}32238 \times 20}{5{\cdot}80645}$ francs = 25·2215 francs.

Thus the mint par between London and Paris was 25·2215 francs to £1. If the exchange is at par, under these conditions a French importer would get £1 in London by paying 25·2215 francs in Paris to meet his obligations. An English importer would get 25·2215 francs in Paris by paying £1 in London.

5. Specie Points. Now suppose the French people have to make more payments to the English people than the latter have to make to the former. The demand for the English money in France will be greater than its supply. The value of the £ will rise in terms of the franc. The French importer will have to pay more than 25·2215 francs in order to get £1 in London. But how much more will he be willing to pay ? We have already said that an importer will send gold if he can get it and thinks it cheaper to send it. Gold standard countries always provide gold in exchange for their money and allow it to leave the country. But gold involves cost of transport (shipping, insurance, interest charges, etc.) when it has to be sent out. The importer in France will, therefore, only send gold if the exchange is higher than the par to the extent of more than the cost of transporting gold from Paris to London. Suppose the cost of transporting 25·2215 francs worth of gold from Paris to London is ·3 francs. Then it will be worthwhile sending gold if the exchange rises above 25·2215 francs to the £ by more than £·3 francs. If the exchange actually rises above this point, gold will begin to move from France to England. This point is thus called gold export point from the point of view of France and gold import point from that of

England. This point is obtained by *adding* the cost of transport to the mint par of exchange. It is also called the *upper gold point* or the *upper specie point.*

In the same way, there is a *lower specie point, or gold import point* for France and gold export point for England. This is obtained by *deducting* the cost of transport from the mint par. In the above example, it will be 24·9215 francs to the £. If the exchange falls below this point, the English importers will send gold rather than purchase title to francs.

Thus if gold is available and is allowed to move freely between two countries (on gold standard), the rate of exchange will move between the two limits set by the upper and the lower gold points, also called the "specie points". If gold is not available, the rate of exchange will pass beyond the specie points. These are the two limits within which the fluctuations will be caused by the changes in supply of, and the demand for, foreign money, *i.e.*, bills, drafts, T.T.s, etc.

6. Exchange between Gold and Silver Standards. The above is a case where both the countries concerned are on gold standard. If, however, one is on gold standard and the other on silver standard, the par of exchange will be determined by the price of gold in terms of silver in the country on silver, and price of silver in terms of gold in the gold standard country.

7. Exchange between Inconvertible Paper Currencies—Purchasing Power Parity. But the most difficult case is that of countries both having inconvertible paper currencies. Suppose England and France were both on paper currency inconvertible into metal. Then how many francs would have to be paid to get a £ sterling ? Obviously as many as would have the same purchasing power in France as a £ has in England. If £1 in England purchases a collection of x commodities, then £1 will purchase as many francs in France as will buy the same collection of x commodities in France allowing for the cost of transporting commodities, from one country to the other.

Let us suppose in England £1 purchases x commodities.

In France, x commodities cost 25 francs. Then the rate of exchange will tend to be

£1 = 25 francs.

Now suppose the price levels in the two countries remain the same but somehow exchange moves to

£1 = 30 francs.

This means that the purchasing power of the £1 in France is more than 25 francs. It will pay people to convert £s into francs at this rate, purchase x commodities in France for 25 francs and sell them in England for one £ again, making a profit of 5 francs per pound worth of transaction. This will create a large demand for francs in England, while supply thereof will be less because very few people would export commodities from England to France. The value of the franc in terms of the £ will move up until it will reach £1 = 25 francs. At that point, imports from France will not give any abnormal profits. The £1=25 francs is called the Purchasing Power Parity between the two countries. "While the value of the unit of one currency in terms of another currency is determined *at any particular time* by the market condition of demand and supply, *in the long run* that value is determined by the relative values of the two currencies as indicated by their relative purchasing power over goods and services. In other words, the rate of exchange tends to rest at that point which expresses equality between the respective purchasing powers of the two currencies. This point is called the Purchasing Power Parity."[1]

In the above example, if prices in France get doubled, the value of the franc will be exactly halved. The new parity will be £1=50 francs. This is because now 50 francs will buy *x* commodities in France which 25 francs did before. We suppose that prices in England remain as before. But if prices in both countries get doubled, there will be no change in the parity.

Thus :—

£2=50 francs.

£1=25 francs.

In actual practice, however, the parity will be modified by the cost of transporting goods (including duties, etc.) from one country to another.

Thus between countries on inconvertible paper, the place of the mint par is taken by the purchasing power parity. The difference is that the former is a fixed par while the latter moves with movements of the price levels in the two countries concerned. Day to day fluctuations around this par will take place as before due to changes in the supply of and demand for the currency in question. The limits to these fluctuations will be set by the cost of transporting goods from one country to another. Hence these limits will not be as definite as were the specie points. The above diagram illustrates these points.

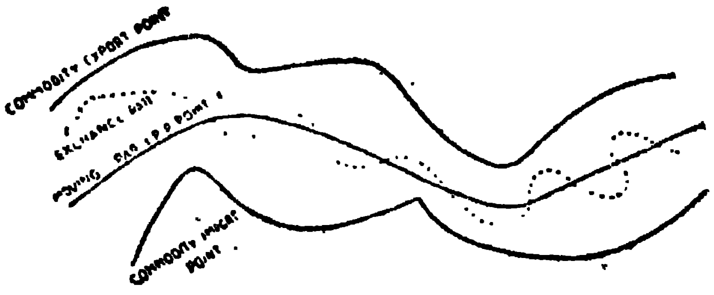

Fig. No. 62.

8. Criticism of the Purchasing Power Parity Theory. This theory was popularised after World War I by Gustav Cassel, a Swedish economist. "The rate of exchange between two currencies," wrote Cassel, "must stand essentially on the question of the internal purchasing powers of these currencies." This is easily seen if we reflect on the fact that the price paid in a foreign currency is ultimately a price which must stand in a certain relation to the prices of commodities on the home market."

It should be noted that purchasing power parity compares the general price-levels in the two countries and not merely the price-levels of goods actually entering international trade. The prices of the latter kind of goods, of course, are the same in all countries allowing for the cost of transportation, tariff, etc. It is quite easy to verify the theory if we only compare prices of internationally traded goods. In fact, when its application is confined to such goods, it becomes an empty truism, because, as Halm says, "it is obvious that the national prices of internationally traded goods tend to equality as between different markets when translated into each other at the current exchange rates."[1]

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[1] Thomas, S.E.—*Elements of Economics.*

But, when we try to compare the index numbers of the prices of the whole mass of goods marketed in the countries concerned, the rate of exchange will not always conform to the points thus determined. This is so because prices of domestic goods may not move in the same direction, at least not in the short period, as of those entering into international trade. In the long run, of course, the rate of exchange and price-levels will tend to move in the same direction, especially if international trade is a major factor in a country's economic life. The theory, therefore, only holds good in the long period. Further, there is no permanence about the goods which do or do not enter into international trade. This depends on the rate of exchange itself. If the price of foreign money goes up, it will make profitable the export of some hitherto domestic goods, and *vica versa*.

Even in the long period. the theory will be valid only if the essential conditions of international trade remain unchanged. But such conditions seldom remain unchanged. For instance, the barter terms of trade are constantly in a process of change between countries due to changes in the demand for foreign goods or changes in the conditions of supply of domestic goods. Further, changes may occur in the volume of foreign loans, cost of transport or in any other item of invisible balance of trade. Changes in barter terms thus brought about may disturb the relationship between the price-levels, and the parities based on such price-levels may not correspond to the rate of exchange. As Cassel observes, "Differences in the two countries, economic situation, particularly in regard to transport and customs, may cause the normal exchange rate to deviate to certain extent from the quotient of the currencies' intrinsic purchasing powers."[2] If a country puts up tariffs, the exchange value of its currency will rise but its price-level will remain the same.

Besides, many items of balance of payments like insurance and banking transactions and capital movements are very little affected by changes in general price-levels. But these items do influence exchange rates by acting upon the supply of and the demand for, foreign currencies. The purchasing Power Parity Theory ignores these influences altogether.

The theory, as propounded by Cassel, says that changes in price level bring about changes in exchange rates but changes in exchange rates do not cause any changes in prices. This latter part is not true, for exchange movements do exercise some influence on internal prices.

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[1] *Monetary Theory*, 1946, p. 224.

[2] Cassel, G.—*Money and Foreign Exchange After* 1914, p. 139.

In conclusion, we may say that the Purchasing Power Parity Theory attempts to explain the ultimate rather than the immediate forces determining the rate of exchange. In spite of its shortcomings, the Purchasing Power Parity Theory is now recognised as the most satisfactory explanation of the rates of exchange in the long run. The theory is applicable to all currencies. It is superior to the old theory according to which the rate of exchange was determined by balance of indebtedness. This theory goes even to the root of the balance of indebtedness. It explains how balance of trade of indebtedness itself is determined. This theory lays proper emphasis on the influence of price-levels on the determination of rates of exchange. The actual rate at any particular moment may diverge from the equilibrium rate as indicated by the purchasing power parity due to the various factors affecting the terms of trade or the balance of payments for the time being. What are these factors ? They are discussed in the section below.

9. Fluctuations of the Rate of Exchange. The long term parity may be the mint par as under gold standard or purchasing power parity as under inconvertible paper. But during the short period, there are various causes that may lead to fluctuations in the rate of exchange above or below this equilibrium level.

These influences can be grouped under two heads :

(*i*) Those affecting demand for, or supply of, foreign currency, and

(*ii*) those affecting currency conditions.

(*i*) As regards the first, the demand for, and supply of, foreign currency arise from three sources :—

(*a*) Trade conditions :

(*b*) stock exchange influences : and

(*c*) banking influences.

(*a*) *Trade Conditions.* These affect exports and imports and hence the supply of, and the demand for, foreign currency respectively. When our exports are greater than imports, exchange will tend to move in our favour . In the opposite case, it will tend to move against us. Exports and imports here include not only visible but also invisible items.

(*b*) *Stock Exchange Influences.* These include raising of loans, repayment of interest and loans, purchase and sale of foreign securities, etc. When a loan is given by the home country to a foreign country, the demand for foreign currency increases and the value of home currency tends to fall. The same is the case when home investors purchase foreign securities or foreign investors sell home securities. The exchange moves in favour of a country when its loans are being repaid or when foreigners buy her securities, because such transactions create demand for the home currency.

(*c*) *Banking Influences.* Under this category come the purchase or sale of bankers' drafts, travellers' letters of credit, arbitrage operations (*i.e.*, buying and selling of foreign currencies to make profit out of differences in the rates in different centres), etc. The sale of a draft on a foreign centre creates demand for foreign currency and raises its value or lowers the value of the home currency. The bank rate also influences exchange rates. A high bank rate attracts funds from foreign centres and thus raises the demand for domestic currency and hence its value. In the opposite case, its value falls because funds move out of the country, thus creating a demand for foreign money.

(*ii*) *Currency Conditions.* Actual or expected changes in the value of currency also affect its exchange rate. If there is an over-issue of currency, or an over-issue is expected, people will not be anxious to invest their funds in such a country. In fact, funds will tend to move out. This is called a "flight from the currency." If people expect a currency to appreciate, they will tend to purchase this currency for speculative gains. In the former case, the exchange rate will tend to be unfavourable and in the latter to be favourable.

10. Limits to Exchange Fluctuations. But these fluctuations take place within certain limits. Under gold standard, as we have already seen, such limits are indicated by the specie points or gold points.

A country is said to have a *favourable exchange* rate if the rate is nearer the gold import point, and unfavourable if it is nearer the gold export point. The rate is also said to be favourable when the value of the home currency becomes higher in terms of the foreign currency or when it is likely to lead to importation of gold on account of excess of exports over imports. If the value of home currency falls or gold tends to leave the country, the rate is said to be unfavourable.

It should be remembered, however, that the terms 'favourable' and 'unfavourable' are only technical terms coming down from Mercantilist era. What is called favourable may not be really so. For example as compared with 1*s.* 4*d.*, the rate of 1*s.* 6*d.*, is said to be favourable to India because at this rate the home currency buys more. But this rate was certainly detrimental to the country's interests as it injured both agricultural and industrial interests when it was first fixed.

The exchange does not rise above the gold import point (supposing it is quoted in foreign currency) because it becomes cheaper to the foreign importer to send gold rather than to purchase our currency. Conversely the rate of exchange does not fall below the gold export point because it becomes cheaper for the home importers to make payments by sending gold out of the country rather than by purchasing foreign money.

When both the countries are on inconvertible paper, the place of the mint par is taken by the purchasing power parity. As already noted, the purchasing power parity is not fixed like the mint par, but is a moving par. Hence there are no definite limits to the movements of exchange. The fluctuation will be in accordance with changes in the demand for, and supply of, currency and in the currency conditions, as already noted.

11. Equilibrium Rate of Exchange. After fluctuations, the rate of exchange may reach a certain comparatively stable level which may be called an *equilibrium rate*. In the history of Indian currency, we read about the battle of ratios : 18*d*. *vs*. 16*d*. Which was the correct ratio ? The advocates of each ratio said that, at the rate they recommended, there was proper adjustment between the rate and other economic factors like prices, wages, interest rates, etc. In short it was the equilibrium rate. When all relevant factors have been taken into consideration, the rate which is the most suitable may be called the equilibrium rate. It is the correct rate ; at this rate there are no disharmonies in the economic system, *e.g.*, there is cost price disparity, and no sector of economy shows any sign of maladjustment or disequilibrium.

The equilibrium rate of exchange has been defined as "the rate which, over a certain period, maintains the balance of payments in equilibrium without any net change in the international currency reserve". It has also been defined "as one that maintains the balance of payments equilibrium without a degree of unemployment greater than in the rest of the world."[1] We may also say that the equilibrium rate is one at which the demand for each currency would be equal to the supply of it and no account is taken of speculative and abnormal capital movements. It expresses a balanced relationship between different economies. At the equilibrium rate, the domestic currency is neither undervalued nor overvalued in terms of foreign currency, so that neither it gives an artificial stimulus to exports nor to imports. It remains neutral.

Halm mentions the following criteria of an equilibrium rate[2] :—

(*i*) It should be in conformity with an average degree of domestic stability. For instance, as has already been said, unemployment inside should not be greater than unemployment outside.

(*ii*) It should not be necessary to overstrain the national gold reserves nor should it lead to depletion of foreign balances to maintain this rate. If domestic currency has to be contracted for the maintenance of the rate which causes depression or impedes recovery, it is obviously not an equilibrium rate.

(*iii*) It should not offer any artificial advantage or inflict any out of-the-way disadvantage on foreign trade. It should remain completely neutral in matters affecting costs, prices and demand of the other countries connected with foreign trade relationship.

12. Correcting Disequilibrium under Gold Standard. If there is a disequilibrium in foreign exchange position, it will need to be corrected. While studying the gold standard, we observed as one of its advantages that under it any disturbances in the equilibrium of balance of payments tends to correct itself. Let us see how this happens. A perfectly ideal gold standard can only be theoretically imagined but the British system before 1914 may be taken as the nearest to the ideal.

Suppose Great Britain of those days imported more than she exported and that this adverse balance was not covered by invisible exports. This would increase the demand for foreign currency (say, that of France which was also on gold standard), thus depreciating the sterling in terms of the franc. This depreciation itself would make British goods cheaper for Frenchmen and French goods, dearer to the British. Exports would thus be encouraged, imports discouraged, and the balance of trade would tend to move in favour of Britain, thus correcting the original disequilibrium. This would happen even if the exchange moved slightly against Britain.

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[1] *International Currency Experience*, pp. 124 and 126, respectively.

[2] *Monetary Theory*, 1946, p. 219.

But suppose the adverse balance was very serious and exchange moved beyond the gold export point in England. Gold would then begin to flow out of England into France. There would be contraction of credit in England (through the action of the central bank to preserve its reserves) and a corresponding expansion of credit in France. Prices and costs would fall in England and rise in France. England would become an attractive market to buy from. The reverse would happen to France. English exports would be encouraged and imports discouraged. Thus the original cause of disequilibrium would be corrected.

For the automatic working of such a system, as we noted in an earlier chapter, certain conditions must be satisfied : gold should be allowed to move freely and to have effect on the prices and costs in the two countries, raising them in the country receiving it and lowering them in the one losing it. This implies the elastic character of the economic system and the willingness of the central banks to play the game of the gold standard.

These conditions existed to a fair extent before 1914 and ceased to exist after world war I. Thus it was that the gold standard ceased to be effective in automatically correcting international disequilibria.

13. Correcting Disequilibrium under Inconvertible Paper. If goods are allowed to move freely between countries, similar automatic correction can be imagined under the inconvertible paper system also. Instead of gold movements, there will be movements of goods, with their effect on the relative price-levels in the two countries.

In actual practice, however, relative price changes in countries are much more difficult to realise when the connecting link is a commodity or commodities than when it is gold. For one thing, gold is much more universally accepted than commodities, the demand for which depends upon a host of factors. Thus the actual rate of exchange may remain divergent from the purchasing power parity, and this disequilibrium may not be corrected by changes in the relative price levels. In such a case, the usual method of bringing about equilibrium is to let the exchange move to adjust itself to the price-level.

Another difference between exchange under gold standard and that under paper standard is that the present value of paper currency is to a large extent influenced by opinions about probable future value. If it is generally believed that the currency in question is likely to depreciate, people will try to get rid of it by converting it into a currency with better prospects. Thus such a currency will depreciate even though nothing has happened to the relative price levels in the countries concerned. A disequilibrium will thus arise through this speculative influence.

Another factor is the influence of the intensities of reciprocal demands of one country for the good of the other. Even when the relative price-levels remain undisturbed, if for any reason the demand of country A for the goods of country B becomes relatively more intense, the rate of exchange will move against country A and in favour of country B to a greater extent than necessitated by differences in price-levels. If the two countries are on gold standard, this condition would have resulted in A losing gold to B until the changes in the price levels brought about equilibrium at the mint par of exchange.

To sum up, we may say that, between countries on gold standard, the equilibrium tends to be established through movements of gold and of relative prices and those on inconvertible paper through movements in exchange rates.

14. Exchange Stability *Vs.* Price Stability.[1] Thus under gold standard, exchanges are relatively more stable and adjustments are made through gold movements with consequent effect on relative price-levels. Under inconvertible paper, adjustments are made more easily by movements in exchange. But even under inconvertible paper, exchange may be artificially controlled and kept stable. Then adjustment will have to be made by a painful movement of relative prices and costs in the countries concerned.

The question arises : Which policy should be the aim of a country to pursue—echxange stability or price stability ? No straight answer can be given to this question. It will depend upon the economic conditions within the country concerned and on the volume of its foreign trade.

If the country is a large one and foreign trade plays only a minor part in its economy, and its price and cost structure is not elastic, it will be to its advantage to preserve stability of its price-level and make necessary adjustments by moving the exchange rate. On the other hand, a small country with a large amount of foreign trade and elastic price-cost structure, will do well to keep its exchange rate stable and let adjustments be made through movements of internal prices and costs. For instance, a country like India should aim at stable prices and free exchange, while for Great Britain stable exchange is the more important objective.

In recent times, however, the objective of monetary policy has shifted from both these. It is neither exchange stability nor price stability which is the aim, but the stability of economic life as a whole or smoothing out of cyclical fluctuations.

15. Fluctuating *Vs.* Fixed Exchange.[2] Should the rates of exchange be left to take care of themselves, free to move in any direction, or should they be kept stable ? Something can be said in favour of each course. The advocates of flexible rates of exchange say that a system of free rates enables a country to pursue an independent economic policy. It should look to internal stability *i.e.*, stability of prices ; output and employment and leave the exchange rates to vary as they would. Such a policy would eliminate outside interference with internal economy. The rate of exchange has an equilibrating influence on the balance of payments and it is better, it is said, to let this equilibrating factor work freely and automatically. The rate of exchange acts as a shock absorber. If the rates of exchange are kept rigidly fixed, the shocks of inflation and deflation from abroad are transmitted to the internal economic system. But variations in the rates of exchange can ward off the invasion of the inflationary and deflationary forces. It is also asked : "If demand and supply formula works so excellently in all economic spheres why not in the foreign exchanges ?"

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[1] *See* also Ch. XXXVI, Sec. 12.

[2] *See* League of Nations—*International Currency Experience*, 1944, pp. 117-22 and also Ch. XI.

There seems to be a great deal of force in these arguments but the policy of freely fluctuating rates of exchange has been almost universally abandoned on the following grounds.[1]

1. Since variations in rates of exchange affect imports and exports, a policy of fluctuating exchanges is inimical to domestic stability. It will necessitate constant reshuffling of the natural resources as between the import industries and export industries, which may involve waste besides making the internal economy precarious.

2. A fluctuating rate of exchange adds to the hazards of international trade, and, by making it risky and uncertain, proves prejudicial to its healthy growth.

3. Under a system of fluctuating exchanges, there are always anticipatory dealings in foreign currencies which lead to self-aggravating and cumulative movements in the rate of exchange making it highly unstable. If, therefore, there is merely an anticipation of exchange depreciation, it proves dangerous and leads to flight of capital. Thus fluctuating exchanges cannot always be relied upon to promote adjustment.

4. Fluctuating rates of exchange cause windfall profits and losses. In order to be able to take advantage of a sudden turn in the rate of exchange, business men have to maintain a high state of liquidity which means contraction of credit, higher rates of interest and diminution in the volume of employment.

5. The fluctuating rates are also calculated to discourage long-term international investments, since anything which dislocates internal economy must have a deterrent effect on the prospective investor.

From the above discussion, it is clear that neither fluctuating exchange rates nor rigidly fixed rates would serve the purpose. "While exchange variations are certainly an unsuitable and undesirable means of dealing with short-term discrepancies in the balance of payments, an absolute rigidity of exchange rates in the face of drastic changes in other factors at home or abroad may thus be equally harmful. The general interest may call for an occasional revision of currency values so as to eliminate as far as possible any chronic and structural disparity between price-levels and exchange rates in different countries."

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[1] *See* Halm, G. N.—*Monetary Theory*, 1949, pp. 211-16.

The dangers and disadvantages of the fluctuating exchanges have led to the introduction of the system of exchange control.

16. Exchange Control[1]. Since World War I, the State has exercised a growing control over the movements of exchange for various reasons.

The object of controlling exchange is to fix it at a level different from what it would be if the economic forces were permitted free inter-play. The system of exchange control is instituted when there is a serious imbalance in the economy of the country relatively to the outside world. It may be that the country's gold reserves are being depleted ; or that the balance of payments is persistently adverse ; or that there is a flight of capital from the country ; or that foreign exchange is to be conserved for large payments abroad. In all these circumstances, a free exchange would be either embarrassing or prejudicial to the object in view, and exchange control becomes an imperative necessity.

There are three possible courses that a country adopting exchange control may like to pursue, considering the economic situation in which it may find itself[2] : (1) It may like to under-value or depreciate currency ; or (2) it may decide on over-valuation ; or (3) it may decide to avoid fluctuations and maintain a stable rate. Let us consider when and with what consequences each of these courses may be adopted.

When a country decides on under-valuation or depreciation, *i.e.*, fixing a rate lower than it would be in a free exchange market, exports are stimulated and imports are discouraged, and internal prices will rise relatively to prices prevailing outside. This course is adopted to cure depression. But this object may not be fulfilled. Instead of internal prices rising, the external prices may fall. This would happen in the case of a big country like India and the U.S.A. Also, since prices are affected through exports and imports, the desired objective of modifying the price level is more likely to be achieved when foreign trade is extensive than when it forms only a small proportion of the aggregate trade of the country. The policy of under-valuation is more suitable for a country whose exports consist of foodstuffs and raw materials, for during depression, prices of these goods are depressed to greater extent. But since undervaluation will make the imports dear, the purchasing power of the producers of raw materials and food stuffs will be reduced. But it is considered more advantageous to prevent a fall in the prices of goods it has to sell than to prevent a rise in those which it has to buy. During the Great Depression, many countries adopted a policy of depreciation or under-valuation.

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[1] *See International Currency Experience*. Ch. VII and also
Halm, G. N.—*Monetary Theory*, 1946, Ch. XIV and League of Nations *Report on Exchange Control*, 1938.
Crowther, G.—*An outline of Money*, 1950, Ch., VIII,

[2] This discussion leans heavily on Crowther's *Outline of Money*, Ch. VIII.

The second object of exchange control may be over-valuation or fixing the value of its currency at a level higher than it would be if there was no intervention in foreign exchanges. This course is indicated when there is a serious imbalance in the country's trade relationship. As a consequence, the supply of national currency may far exceed the demand for it. The country may be in great need of foreign goods either for prosecution of war or for reconstruction after the war. If exchange rate were permitted to fall in these circumstances, it would make these much-needed imports very costly, or almost prohibitive. When a country finds itself under the sudden necessity of making large purchases from abroad, over-valuation is found to be most suitable. If a country is suffering from inflation, the exchange value of the national currency will go down when exchanges are left free to move. If foreign trade plays a very important part in the economy of the country, this downward trend must be arrested, otherwise imports will become very dear and the exporters will have windfall profits. A policy of over-valuation is also in the interest of a country which has to meet a large debt payment expressed in foreign currency. This was the case with our "Home Charges". If exchange fell, the burden of foreign debt would correspondingly increase.

We cannot dogmatically say whether a country should under-value or over-value. It all depends on circumstances. Over-valuation may suit certain countries and under-valuation certain others. The same country may find over-valuation more suitable at one stage and under-valuation at another. In Crowther's words, "The rough rule-of-thumb, therefore, is : in times of war and scarcity over-value your currency ; in times of slump and surfeit, under-value your currency."[1]

The third course is neither to under-value nor to over-value but to avoid fluctuations. Even here the object is not to keep exchanges rigidly fixed but simply to avoid sudden changes. It is intended to iron out temporary ups and downs and to keep off the adventitious influences. This was done by Exchange Equalization. The I.M.F. is also intended to achieve the same objective.

The exchange control is exercised either by regulating international movements of goods through various devices or by the purchase and sale of foreign currency at specified rates in order to maintain a particular range of exchange fluctuations. Exchange control can be exercised by influencing demand for, and supply of, currencies in the exchange market. This can be done *indirectly* by devices like tariffs, quotas, bounties, changes in interest rates, etc. Imposition of import duties and of import quotas will reduce imports, cut down the demand for foreign currency, lower its value or raise the value of the domestic currency. Export duties, which are not so common, will have the opposite effect. Bounties effect the other way about. Export bounty will raise and import bounty

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[1] *An Outline of Money*, 1950, p. 240.

(which exists now here) will lower the value of the home currency. A rise in the interest rates attracts funds from abroad, increases demand for domestic currency and raises its value and, *vice versa.* But these are the ways in which exchange is *influenced* and not *controlled.* The effect of such devices can be offset by similar devices adopted by rival nations. These measures are not necessarily adopted for controlling exchange and are not sufficiently strong to bring rates of exchange under effective control. Hence more direct methods have to be adopted.

There are two methods generally adopted for controlling exchange. (1) The Government enters the exchange market either to purchase or to sell forign exchange in order to bring the rate up or down to the desired level. This method has been called *intervention* and leads to 'exchange pegging' described below. Or, (2) the Government can prevent the existing demand for, or supply of, the currency, in which they are interested, from reaching the exchange market. This method has been called *Restriction.* The second method has been more popular because intervention proved a weak weapon ; and was also expensive.

Exchange Restriction is exchange control proper. For this three things are done: (*a*) All foreign exchange dealings are centralised, usually in the central bank ; (*b*) the national currency cannot be offered for exchange without previous permission and (*c*) it is made a criminal offence to enter into an unauthorised foreign exchange transaction. The usual procedure is to order all exporters to surrender claims on foreign currency to the central bank and ration the foreign exchange made so available among the licensed importers. Exchange control thus involves import control. Up to 1939, Germany was a pioneer in the method of exchange control although exchange control was adopted in several other European countries also during the Great Depression.

The various forms that exchange control has taken are briefly discussed below :—

(*i*) *Exchange "Pegging".* This device is usually adopted during war in order to minimize exchange fluctuations. The internal value of a currency may depreciate due to inflation but the Government may seek to keep its external value at a higher level than warranted by the purchasing power parity in order to facilitate international transactions. This method was adopted by England during First World War and again in the second war. Between 1916 and 1919 the sterling was kept artificially pegged at 4.765 dollars —a value which was higher than the real value of the sterling. This was done by raising loans in America and through these funds, purchasing exchange on London at the above rate. Success in exchange pegging evidently depends on the resources at the command of the nation. Exchange pegging can iron out more or less sporadic and adventitious fluctuations and cannot avoid fundamental changes in the equilibrium rates of exchange.

(*ii*) ***Exchange Equalisation Account.*** Exchange funds were the outgrowth of the transformation of the international gold standard convention into an international gold settlement system[1] under which gold came to be used as a balancing item in international trade. After the suspension of the gold standard in 1931 by England, there again arose the necessity of preventing violent exchange fluctuations. For this purpose the device of the Exchange Equalisation Account (or Exchange Stabilisation Fund, already explained in a previous chapter)[2] was utilized. "An Exchange Stabilisation Fund is a collection of assets segregated under a central control for the purpose of intervention in the exchange market to prevent undesirable fluctuations in exchange rates."[3] Foreign currency was purchased or sold, as the necessity arose, with the help of this fund, and thus exchange was kept within a narrow range in the face of uncertain movements of short-term funds into and out of England. The Fund is not used to prevent *long-term* adjustments in the value of the currency concerned.

The purposes for which Exchange Stabilisation Funds have been used have differed in different countries and in the same country at different stages. "The aim of the British Exchange Equalisation account was that the account was designed, without resisting general trends, to iron out undue fluctuations in the exchanges caused by erratic movements of capital and the disturbing activities of the speculators."[4] Gradually, however, the object of the Fund was extended, and it was used to combat seasonal exchange fluctuations. The major purpose of other Exchange Funds was to establish and define appropriate exchange levels, *i.e.*, to resist general trends in the exchanges. In a general way, we can say that the main purposes of such Funds are (*i*) to 'iron out' ***short term*** fluctuations in the rates of exchange, and (*ii*) to safeguard against the disturbing influences arising out of the movements of short-term funds and of speculative activities. Continually fluctuating exchanges seriously hamper trade. The Fund is, therefore, meant to facilitate the smooth course of foreign trade.

By similar devices the dollar-sterling rate was maintained at £ 1=4·03 dollars during World War II.

(*iii*) *Exchange Control Proper.* Strictly speaking, the term exchange control is applied to several devices most of which were first introduced in Germany during the Nazi regime. Later, other countries also adopted some of them.

Some of these devices we have already considered while discussing restrictions on international trade. Here we shall look at them again from the point of view of foreign exchange rather than of foreign trade. Such devices are (*a*) Clearing Agreements, (*b*) Standstill Agreements, (*c*) Transfer Moratoria, and (*d*) Blocked Accounts.

Under a *clearing agreement* between two countries, importers in both pay into an account at their respective central banks the purchase price of all goods imported. This money is then used to pay off exporters. The rate between the currencies is usually fixed by the terms of agreement. The object is to regulate imports according to the wishes of the Government, to ensure equilibrium in the balance of payments and to prevent uncertainties of fluctuating exchanges. The system tends to encourage bilateral trade at the expense of multilateral trade and thus has a restrictive effect on international trade. On the other hand, it discourages dumping and currency depreciation. On the whole, the system stands condemned except under special circumstances of war or as a temporary measure to tide over a period of disequilibrium in a country's balance of payments until the basic causes of such a disequilibrium have been removed.

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[1] For characteristics of the Gold Settlement System, *see International Currency Experience*, p. 155.

[2] Chapter XXXII.

[3] League of Nations—*International Currency Experience*, 1944, p. 143.

[4] *Ibid.*

A *standstill agreement* is a device to prevent the movement of capital through a moratorium on outstanding short-term foreign debts of a country and to give her time to put her house in order. Either the short-term debt is converted into long-term debt or provision is made for its gradual repayment. This device was used in Germany after the crisis of 1931.

Transfer moratoria is another device of the same kind. Under this system, importers or others pay their foreign debts in their domestic currency to a specified authority. When the moratorium is concluded these funds are remitted abroad. A foreign creditor is sometimes allowed to use his funds in the country imposing the moratorium in a way specified by the government.

Blocked accounts spring from the previously considered two devices of standstill agreement and transfer moratoria. When foreign debts paid in domestic currency to the central bank cannot be remitted abroad without the permission of the Government, blocked accounts are said to arise. Since idle funds in the country lead to contraction of credit, the foreign creditors are not altogether prevented from using them. But they have to be used according to the manner prescribed by the Government. Usually they are allowed to be sold in the open market. In most cases, they are sold at a heavy discount.

17. Forward Exchange. The risks of fluctuating exchanges, especially under the inconvertible paper standard, can be avoided through the device known as 'Forward Exchange'. Under it the person who has to make or recover payment in foreign money at some future date enters into a contract with a bank settling the rate of exchange now. Suppose an Indian importer has to pay an English exporter £500 after a period of three months. He cannot be certain how many rupees he will have to pay when the time comes due to the uncertainties of exchange. Without exactly knowing the cost, he cannot fix the price of the imported commodity. He can get out of this difficulty by buying forward sterling at a rate agreed upon now. This relieves him of the risk of exchange fluctuation. In a similar way, an Indian exporter, who has to receive sterling in the future, can sell it now at an agreed rate to the bank and be sure of the actual number of rupees that he will get.

The rates of forward exchange are quoted in terms of the rate of the 'spot' rate, as it is called. The forward rate is at a 'premium' if less of foreign money is given for a unit of domestic money. It is at a 'discount' if more is given for a unit of domestic money.

Under what circumstances may forward rate be at a discount or at a premium respectively ? In other words, what are the factors that banks take into account when quoting forward rates ? Generally three factors are taken into account:

(*i*) *The relative rates of interest at home and abroad.* If the rate of interest at the foreign centre is higher than at home, it pays the bank to transfer funds to the foreign centre. Thus it can afford to sell forward exchange at cheaper rates. The forward exchange will be quoted at a discount. If the domestic rate of interest is higher, there is no inducement to transfer funds abroad. The forward exchange will be quoted at a premium.

(*ii*) '*Marrying*' *a Contract.* Instead of transferring funds, the bank may offset one transaction with an opposite one. Some merchants want foreign currency in the future, others are in a position to sell foreign currency in the future. The bank comes in as intermediary, buying from the one and selling to the other with a margin of profit for itself. This is called 'marrying 'a contract. If the bank therefore has already bought forward exchange, it will sell it at favourable rates to those who want to purchase it from the bank. Forward rates will thus be quoted at a discount, since the bank has already covered the risk.

(*iii*) *Currency conditions.* If the foreign money is expected to depreciate, the bank will be unwilling to buy it forward, and thus forward rates will be quoted at a premium.

It is easy to understand, in the light of the above, how forward exchange transactions or dealings in futures, as they are called, contribute to the reduction of exchange fluctuations. These dealings are carried on not only for genuine trade purposes but also for speculative purposes.

18. Arbitrage Operations. While forward exchanges reduce exchange fluctuations over time, arbitrage operations reduce differences in exchange rates over space. An example will make this point clear. Suppose in the Bombay exchange market, the rupee-sterling exchange is quoted at 18*d*. to the rupee, and in London, for some reason, the rate rises to 19*d*. per rupee. Obviously there is an opportunity for making profits out of this difference. You can wire your bank in London to buy sterling at the rate of 19*d*. per rupee which you sell through your bank in India at the rate of 18*d*. per rupee making 1*d*. profit on every rupee. Other people no doubt will also do the same. The demand for sterling in London will rise and the rate will tend to move towards 18*d*. per rupee. On the other hand, the supply of sterling in India will increase and its value in terms of rupees will tend to fall. The exchange rate will move towards 18d. This will go on until the rates in India and in London are practically the same. Of course such a high difference as we have assumed is impossible because arbitrage operations keep the difference at the very minimum.

19. The International Monetary Fund.[1] A more recent attempt to prevent exchange fluctuations is made on an international scale through the establishment of an International Monetary Fund. This was the outcome of the Bretton Woods Conference held in the summer of 1944. The main purposes for which the I. M. F was set up were to provide exchange stability, temporary assistance to countries falling short of foreign exchange and international sponsoring of measures for curing fundamental causes of disequilibrium in balance of payment.

According to Article 1 of the Fund, the main purposes of the Fund are :—

1. To promote international monetary co-operation through a permanent institution.

2. To facilitate the expansion and balanced growth of international trade, and to contribute thereby to the promotion and maintenance of high levels of employment of the member-countries.

3. To promote exchange stability, to maintain orderly exchange arrangements among members, and to avoid competitive exchange depreciation.

4. To assist in the establishment of a multilateral system of payments in respect of current transactions between members and in the elimination of foreign exchange restrictions.

5. To give confidence to members by making the Fund's resources available to them under adequate safeguards, thus providing them with opportunity to correct maladjustments in their balance of payments without resorting to measures destructive of national or international prosperity (*e.g.*, deflationary policies).

6. In accordance with the above, to shorten the duration and lessen the degree of disequilibrium in the international balances of payment of members.

The International Monetary Fund (I.M.F.) was constituted by subscriptions from members agreeing to participate in the Fund amounting 8·5 billion dollars out of which India's contribution was 400 million dollars. The subscription was to be partly in the form of gold and partly in domestic currency. A member-country is required to pay 25% of its quota or 10% of its holdings of gold, whichever is smaller, in the form of gold. The resources of the I.M.F. are thus partly gold and partly currencies of the member-countries, the latter being kept in the central banks of the countries concerned.

The Fund can purchase and sell currencies of member-countries for one another subject to the condition that the holding of no member-country's currency should exceed 200% of its quota. The member-countries can get accommodation from the Fund to the extent of 75% of their quota plus an addition of 25% each year subject to a maximum of 200% of their quota. These conditions may be relaxed at the discretion of the Fund. Thus a debtor-country is saved from gold exports and in consequent deflation (as happened under gold standard) through the help of the Fund.

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[1] *See* the excellent article on "The International Monetary Fund" by Alvin Hansen in *America's Role in World Economy* reprinted by Hess and Others in *Outside Readings in Economics*, pp. 752-64.

See also Halm, G.N.—*Monetary Theory*, Ch. XV.

The creditor-countries whose export surplus exceeds 75% of their quota will have their currencies declared scarce. Such currencies are rationed among countries needing them. The I.M.F., however, can increase the supply of scarce currencies by borrowing them or by purchasing against gold. If even then these currencies are not enough, debtor-countries must restrict their imports from creditor-countries and thus achieve equilibrium in their balance of payments.

As regards the rates of exchange, member-countries are required to fix parities of their currencies with gold. But these parities need not be fixed for all time. An all-round uniform change in them can be brought about by the consent of the member-countries contributing individually more than 10% of the aggregate quota. Apart from this, the member-countries can alter exchange value of their currencies by 10%. Another 10% change can be brought about by the consent of the Fund. Changes beyond this can be brought about, with the consent of the Fund, only to correct fundamental disequilibria.

"Thus, exchange depreciation, which may be necessary for a country whose money is over-valued, can be accomplished without inviting retaliation. In this way, the Fund not only provides temporary assistance in tiding a country over a period when it cannot acquire an adequate supply of foreign exchange ; it also sponsors measures to remedy more fundamental difficulties. And by holding member-countries to their agreement not to engage in *competitive* exchange depreciation, it introduces a measure of disarmament into the field of international economic relations."[1]

The Fund does not interfere in the internal economy of member-countries in order to restore equilibrium in their balance of payments. The members can withdraw from the Fund by a simple notice in writing.

The Fund is managed by an Executive Board of twelve directors on which India, China, the U.S.A., Great Britain and France have a permanent seat each. Two seats go to Latin American Republics, while the other five are filled by election.

This is a system analogous to exchange stabilization accounts evolved by individual countries during the depression years of the 'thirties. The same principles have been carried to the international plane. It seeks to achieve the purpose of international gold standard without its shortcomings.

From the brief account of the International Monetary Fund given above it can be seen that the Fund performs three major functions.

1. *It serves as a short-term credit institution.* If any country is in a temporary difficulty in liquidating an adverse balance of payments, the Fund will come to its aid. It does not, however, undertake to supply all the foreign exchange that a country may use. All

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[1] **Tarshis, L.—*The Elements of Economics*, 1946, p. 619.**

countries are supposed to have their separate monetary and foreign exchange reserves to meet their normal requirements. The Fund is not intended to supplant them but to provide only a second line of defence in case of emergency. The borrowing country has to pay interest and maintain its quota intact. Let a country should borrow unnecessarily, the rate of interest rises as the amount of loan increases. Lower rates are charged if loan is taken for a short period. If the amount of the loan and its duration are such as to raise the rate of interest to 5% the fund can then raise the rate to any level by way of penalty, for this is regarded as an abuse of the privilege of membership. Thus it is clear that the credit operations of the Fund are not only conducted on sound business principles but they also ensure that the object of the Fund, *viz.*, to provide short-term loan *only*, is not defeated.

2. *The Fund provides a mechanism for improving long-term balance of payments position.* For this purpose its rules provide for orderly adjustment of exchange rates. No member-country can indulge in irresponsible and competitive exchange depreciation thus introducing the law of the jungle in international monetary relations. Whenever a country feels that its rate of exchange is out of line with its economy, the rate can be altered but only after due deliberation between the country and the authorities of the Fund. There is thus provision for the careful determination of the initial rate and its orderly adjustment subsequently. This procedure at once reconciles the claims to internal stability and full employment on the one hand and to international stability and high level of world trade on the other. Every country must now rely on its own productive efficiency rather than on artificial stimulus of exchange depreciation to hold its own in the world markets.

3. *The Fund provides machinery for international consultations.* It brings together representatives of the principal countries of the world and affords an excellent opportunity for reconciling their conflicting claims. This constructive approach and the measure of international co-operation are bound to have not only a stabilising influence on world economy but also lead to the expansion and balanced development of world trade and world production. It will thus contribute to the promotion and maintenance of high levels of employment and real income and to the development of the productive resources of all member countries. In order to achieve this purpose, the Fund is engaged in constant study and research relating to the important and urgent economic problems of the world.

It is clear that the Fund can play a vital role in achieving international economic stability and in promoting healthy international monetary relations. But for many years, the Fund was not able to achieve its fundamental objective. Its seventh report issued in September 1952, said, "It is a melancholy fact that seven years after the end of the war there has been little secure or sustained progress towards multilateral trade and convertibility." Agricultural production dominates fiscal policies in Europe and the U.S.A. It is a pity that the U.S.A. still clings to the protectionist policy in spite of her tremendous competitive strength. These policies are repugnant to the underlying objectives of the Fund. Lack of international co-ordination of monetary, import and stock-piling policies aggravate the difficulties. The report emphasizes internal monetary stability as the primary need and it has issued a warning to the member countries to end inflation or the world will move further towards restrictions on trade and currency convertibility.

The post-war dislocations proved a little too much for the I.M.F. In 1948, France carried 44·4% devaluation and established a free market in gold and U. S. dollars in Paris which were incompatible with the principles of the Fund. But still the Fund treated France in distress with sympathy and enhanced its reputation for its principles, and for its management. Up to September 1949, there was no general devaluation ; but Great Britain devalued her £ at that time by 30·5% and the British example was followed not only by the Commonwealth nations (except Pakistan) but also 13 other countries. The Fund could object to this big change in the par value of the currencies involved but did not. It felt that the action was necessary to correct a fundamental disequilibrium. The change, though not agreeable, was inescapable. Such events in the life of the Fund as well as the multitudinous exchange restrictions reflect on the premature birth of the I.M.F.

Mr. Ivar Rooth, Managing Director of the I.M.F., presenting his report in September, 1952 said that he was "not asking these nations to imperil their payments position by a premature removal of restrictions".

An apt picture of the working of the Fund is given by Coulborn : "There are (1952) fifty (68 in 1958) countries trying to play the semi-Gold Standard game, whereas there used to be six principal players and few lesser ones. Yet it is the same game, (because I.M.F. is essentially an amalgamation of the Exchange Equalisation Accounts of Gold Standard days put under international control), and the chief players are the same, as the voting strengths show. It remains to be seen whether it is a better game played somewhat publicly in Washington, with fairly precise rules codified for it and a large number of amateur players taking a small part, or whether it was better when six stars played with skill and without distractions, making the rules as they went along. It may be a reasonable guess that the best game of all will prove to be a combination of the present form with the earlier one. There might be added both strength and flexibility to the I.M.F. system if the Exchange Equalisation Accounts provided anew with resources in some cases, came into the exchange markets again in the more important financial centres."[1]

Funds of the I.M.F. may not be sufficient to cope with the sudden movements of hot money when there are not exchange controls to stop them. Then there are national sovereignties to be reckoned with. "The I.M.F. agreement is a transparent piece of paper stretched across the cracks which exist in the world polity of every national character.'

On January 1, 1954, the Fund had 56 members whose aggregate subscriptions amounted to $8·9 billion. The U.S.A. had the largest quota ($2,750 million) and India having the fifth largest amounting to £ 400 million. The number of members went up to 68 in 1958.

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[1] Coulborn—*Discussion on Money*, 1950, p. 299.

According to Ivor Rooth,[1] the chairman of the Board of Executive Directors, there are three main tasks before the I.M.F. : (1) to help to restore international balance, (2) to help its members in establishing the convertibility of their currencies ; and (3) to minimise the international impact of business fluctuations.

The annual report of the Fund presented in its annual meeting held in October 1958 in New Delhi says that considerable headway has been made toward the achievement of its objectives. To an increasing extent, the world has been moving toward exchange stability with orderly exchange arrangements, among the Fund's members, the avoidance of competitive depreciation, the elimination of exchange restrictions and establishment of a multilateral system of payments. There is no doubt that some less developed countries with falling demand for their exports had deemed it necessary to intensify their restrictions. But a number of other countries had progressed toward a greater measure of freedom from exchange restrictions or avoided reimposition of restrictions.

In the end of December 1958, many countries of westerm Europe including England announced the free convertibility of their currencies. It has been interpreted as an outward and visible sign of the come-back of Europe in world affairs.

Drawings on the Fund since March 1947 now exceed $3 billion. The Fund has entered into exchange transactions with 35 countries. Total transactions at April 30 end of the fiscal year 1957-58 amounted to equivalent of $ 3,016,200,000 and unutilised drawing rights under stand-by arrangements represented potential additional claims equivalent to $ 884,300,000. The Fund's holdings of gold and U.S. and Canadian dollars on April 30, 1958 amounted to equivalent of $ 2,343,600,000.

But it is doubtful whether, in the circumstances of the world today, with world trade greatly expanded in volume and value, the Fund's resources are sufficient to enable it fully to perform its functions. In the period 1947-57 the physical volume of world exports had increased 90% and prices of goods moving in international trade had increased by 147% in the 20 year period 1937-57. In the last decade the volume of world trade had nearly doubled. On the other hand, the Fund quotas had, with minor exceptions, remained at the amounts fixed in 1944.

Hence the Governors of the Fund had asked the Executive Directors in its New Delhi meeting in October 1958 to consider the desirability of an enlargement of the Fund's resources through increases iin quotas. Accordingly, the Executive Directors have recommended a general increase of 50% in members' quotas and higher proportional increase for Canada and the Federal Republic of Germany and Japan. This would add the equivalent of $ 5·1 billion to the Fund's resources including gold payments of $ 1·3 billion. The Fund's holdings of gold and U.S. dollars would double increasing from $ 2·3 billion to $ 4·6 billion. The I.M.F's present (January 1959) quotas amount to 9·2 billion dollars. However, the increases would take effect only if member-countries having 75% of the total present quotas consent to increases in their individual quotas before September 15, 1959.

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[1] *See* his article on Tasks before I.M.F. in the Annual Number of *Commerce*, December, 1953, p. 32.

India and the I.M.F. India agreed to join the I.M.F. because :

(*a*) India was left free to change her link with the sterling and to change the ratio of her exchange according to her own needs. The Fund does not impose any obligations on India to continue the sterling link. In fact, India has fixed her parity with gold. The Fund provides for a sympathetic consideration for changes in exchange rates.

(*b*) The Fund agreed to respect the autonomy of its members. India was left free to use her fiscal policy in the interest of her own industrial development.

(*c*) India was given a permanent seat on the management of the Fund.

(*d*) A country must become a member of the I.M.F. in order to be a party to the International Bank for Reconstruction and Development. Hence I.M.F. membership was essential if India wanted to benefit from the I.B.R.D.

(*e*) Since other countries has joined the scheme, India did not want to be isolated in the international sphere.

Each country can draw, almost as if by right, the foreign currency of other members up to a limit which is proportionate to its contribution to the Fund in its own local currency and gold. India's contribution is £ 400 million and she is entitled to draw $ 100 million of foreign currency against the rupee securities pledged by her to the Fund and an additional $ 27·5 million against her gold contribution. A sum of $ 100 million was drawn in 1948-49, and has since been redeemed to the full. In order to meet the shortage of foreign exchange, India negotiated in January 1957 for a loan of $ 127·5 million from the Fund. In 1957, India availed of $ 200 million stand-by credit. The Fund does not offer long-term loans for economic development (which is the function of the World Bank), but short-term advances of foreign currency required for meeting temporary balance of payments deficits.

The Fund has made available the services of the specialists for advising India on the various projects. A number of Fund Missions have visited this country and have thoroughly surveyed the country's economy and scrutinized its economic and fiscal policies as well as its development plans and given their expert opinion and valueable advice.

20. Comparison with International Gold Standard. The International Monetary Fund resembles gold standard in certain respects.

Thus :—

(*i*) Under gold standard, every country balances its external account with the rest of the world as a whole and not with countries individually.

This is called multilateralism as against bilateralism that became quite popular during the depression of the 'thirties. Export surplus to one country under multilateralism can be used for paying import surplus for another. In the same way under the I.M.F. scheme currencies are convertible at parties fixed at any particular moment, though subject to change under appropriate conditions. Thus multilateral transactions are encouraged.

(*ii*) Under gold standard, a country with a net deficit in the balance of payments meets it by export of gold or drafts, etc. The I.M.F. quota performs this function under the new arrangements.

(*iii*) Under gold standard, there were no restraints such as quotas and direct exchange restrictions which are inconsistent with the principle that trade should be governed by comparative costs. These restrictions directed trade into channels not warranted by this principle. Under the I.M.F. also such restrictions will be removed after the transitional period is over. Multilateral trade will be restored on the basis of freely convertible currencies and reasonably stable exchanges.

All these results are secured under the I.M.F. without the disadvantage of gold standard. We have already referred to some defects of the gold standard in another connection. We may give here the two most important defects of that system which the new arrangements avoid :

(*i*) Under gold standard, gold reserves in a country were affected in precisely the same way by an import surplus on current account (*i.e.*, unfavourable balance of trade) and by the withdrawal of capital. Gold moved out and contacted credit. This defect was largely overcome by the system of exchange equalization account which prevented the inflow or outflow of short-term capital from affecting the basis of domestic credit. The new scheme enables a country to meet her adverse balance by the help of the I.M.F. without unfavourable effects on its credit structure which a deflationary policy must produce.

(*ii*) The second and more important defect of the gold standard was that exchange stability was made the first objective of monetary policy, and it was maintained by deflation of credit in the country losing gold. In theory, the country receiving gold was expected to expand credit though this part of the rules of the game was not always observed. This method of maintaining equilibrium in the balance of payments, and hence exchange stability, worked smoothly only so long as wages (and other costs) were flexible so that deflation of credit lowered prices of exports and removed the original causes of disequilibrium. But since costs have become more and more rigid, especially due to trade union pressure for maintaining wages, deflation means paralysis of economic activity and unemployment in the country with all its consequences.

The I.M.F. arrangements seek to escape these rigidities of the gold standard. As we have seen, though exchange rates are fixed in terms of gold by the member-countries, provision is made for change in these rates in the case of a fundamental disequilibrium. The changes, however, are to be made with the permission of the Fund, but such permission is not to be withheld in genuine cases.

Even under the I.M.F. gold will continue to perform the following functions[1] :—

1. When gold parities are being altered, it will help to keep the rates of exchange stable.
2. When there is a temporary disequilibrium in the balance of payments, it would serve as a stop-gap.
3. It is a common denominator for different currencies.
4. Since gold has been given a definite place in the I.M.F., it has induced gold-producing or gold-holding countries to join the Fund.

As Halm observes, "The Fund's gold provision are not just window-dressing. Gold plays a really important role as the Fund's most liquid asset and as a common anchorage for the member currencies."

Thus the I.M.F. combines the advantages of gold standard with those of free exchanges. Gold still remains the ultimate standard of value but the rigidities of the gold standard have been avoided. The working of the Fund, however, requires a high degree of international co-operation. Hence, though gold plays an important role in the Fund because a member-country's currency is expressed in terms of gold, yet, as is clear from the above discussion, the machinery of the Fund cannot be interpreted as a return to the gold standard.

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[1] *See Halm*, G. N.—*Monetary Theory*, 1946, pp. 208-9.

CHAPTER XLI

THEORY OF EMPLOYMENT

1. Aggregate Output and Employment. In the foregoing chapters, we were mainly concerned with the principles determining the pricing of productive resources and their allocation as between different uses. The theory of value and distribution is mainly concerned with these principles. Although prices are very important yet of much greater importance is the volume of activity and employment in the economy as a whole. This subject, however, did not receive sufficient attention till recently. The great depression of the 'thirties of this century led economists to think much more seriously about this question and Keynes' General Theory of Employment, Interest and Money was the pioneering attempt in that direction. The subject has further gained in interest and importance as a result of the quest for rapid economic development in the under-developed areas of the world. The factors on which the state of employment in a country depends deserve serious consideration. We, therefore, now enter a new and much more extensive territory. Our interest now shifts from the constituent parts of an economy to the economy as a whole. We are now concerned with the total output of goods and services and the total employment of productive agents turning out these goods and services. The problem which we have to investigate is: What determines the level of total output and employment and the fluctuations in this level from one time period to another. Thus the problem has two aspects : (1) the determinations of aggregate output and employment at a moment of time ; (2) the analysis of causes of fluctuations in this level over a period of time. The second aspect opens out into the theory of industrial fluctuations more commonly known as the theory of trade cycle and we shall study this in the next chapter.

2. Types of Unemployment. *The structural, long-term or Marxian Unemployment*. Before we can suggest remedial action against unemployment we should know something about the causes of unemployment. We have already discussed unemployment[1]. It is necessary here to refer to it again in certain aspects.

In the modern world, man by himself can hardly produce anything. Even the primitive man needed some elementary tools like the bow and the arrow to engage in hunting for the earning of his livelihood. With the growth of technology and specialisation, he needs much more capital with which to engage in the productive activity. If he is an agriculturist, he needs a piece of land and also a plough, a pair of oxen, seeds and some foodgrains and other necessities of life to sustain himself during the period of the sowing to the reaping of the harvest. In the industrial sector, he needs factories to work in and machines to work with. All these aids to production belong to the community's stock of capital. Now if the working force grows faster than the stock of capital of a country, the entire addition to labour force cannot be absorbed in productive employment—because not enough of instruments of production are there to employ them. The resulting unemployment is known as the ***structural, long-term or Marxian unemployment.***

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[1] **Chapter. XVII.**

The classical economists were mainly concerned with this type of unemployment. A nation's stock of capital can be enlarged by increased investment which in the absence of any unutilised resources, requires additional savings on the part of the community. The concern of the classical economists was to ensure that the rate of capital formation was kept sufficiently high so that employment opportunities were successively enlarged to absorb the additions to working force of the country as a result of population growth. This is also the problem that under-developed countries like India are facing today. In recent times, the population of India has been growing at an annual rate of 1·50 per cent yet our rate of investment expressed as a percentage of national income has only been 5 to 6 per cent a year. Since our stock of capital has not been growing at a fast enough rate so as to keep face with the growth of population, the country's ability to offer productive employment to the newly entrants to the labour market has been severely limited. This manifests itself in two things—firstly, the prevalence of large scale unemployment in the urban areas as evidenced by the statistics of employment exchanges; second, it manifests itself in the form of growing numbers engaged in agriculture. It is a common knowledge that with minor changes in organisation and with existing techniques, our agriculture can be looked after by a much smaller number of persons than are engaged now in it. If alternative employment opportunites were available, these people could be removed from agriculture where their marginal productivity is very low (if not zero or negative) to occupations with higher marginal productivity, and the national income of the country would rise. Since employment opportunities in the non-agricultural sector are not growing rapidly, the new entrants to the work force are compelled to remain in agriculture and perpetuate the phenomenon of ***disguised unemployment*** which means that people are engaged in occupations where their marginal productivity is very low (if not zero or negative) and that a shift to alternative occupations will improve their marginal productivity and add to national income of the country.

The basic solution to the problem of this sort is the faster rate of capital formation so as to enlarge employment opportunities. For this purpose, every possible encouragement should be given to savings and their productive utilisation in increasing the rate of investment. In under-developed countries investment incentives are very low and the state can assist in the process of capital formation directly as well as indirectly. Through a fiscal policy which encourages savings and investment and a sound monetary policy it can do much to encourage investors. The state itself can participate in the process of capital formation by undertaking such developmental activities which the private entrepreneurs do not find it profitable to undertake. Under-developed countries suffer from a notorious shyness on the part of private investors; therefore the state has got to assume a special role in speeding up the rate of economic development. The other line of attack has got to be on the rate of population growth. Malthusian theory may be wrong but it remains true that if population grows at a rapid rate then to maintain the people even at their existing levels large amounts of capital are needed which could otherwise have been used to raise the amount of capital available per man and hence raise the living standards at a faster rate.

3. **The Frictional Unemployment.** In a progressive society, techniques of production are constantly changing with the result that the people now engaged in occupations using older techniques are likely to lose their jobs when these techniques are replaced by newer and more efficient techniques. This is called frictional unemployment and is an inevitable consequence of technological progress. Some action, however, can be taken to minimise the harmful consequences of frictional unemployment by offering quick retraining facilities to the unemployed, providing labour exchanges, and by arranging adequate social security measures to help the unemployed during the transition and by regulating in an orderly manner the pace of technological change.

4. **The Seasonable Unemployment.** This type of unemployment arises because of the seasonal character of a particular productive activity so that people become unemployed during the slack season. Indian agriculture is a seasonal operation so that the farmers have not sufficient work to do during the slack season. Other examples are the ice factories, the rice mills etc. The solution has to be found in rearranging the process of production and where this is not possible complementary, subsidiary jobs have to be created for the people suffering from seasonal unemployment.

5. **Keynesian Unemployment.** It is unemployment due to deficiency of effective demand. It is also called cyclical 'Keynesian' unemployment. Advanced capitalist countries have been suffering from time to time from this type of unemployment. This type of unemployment arises not because of ' too little ' capital but because of' too much ' capital (for a short while in relation to demand for goods and services. In other words, this type of unemployment is due to the fact that the total effective demand of the community is not sufficient to absorb the entire production of goods that can be produced with the available stock of capital. In a private enterprise economy, production takes place in response to the profit motive. When businessmen cannot sell their entire output,. their profit expectations are not fulfilled so that their reaction in the next period is to reduce their output. New factors of production earn their incomes because of their participation in the process of production and when entrepreñeurs decide to reduce their production, some factors of production become unemployed. Since employment is the major source of incomes for a great majority of people, a fall in employment signifies a fall in their incomes also. In the remaining part of this chapter we will be mainly concerned with this type of unemployment.

The theory of effective demand as an explanation of unemployment in the industrially advanced countries is associated with the name of Lord Keynes. Previously, economic theory often denied the very existence of the problem. In the view of classical economists, symbolised* in *Say's Law of markets*, a freely competitive, capitalist economy could never suffer from a deficiency of aggregate effective demand. The argument advanced by Say (a French economist) and accepted implicitly by many others, in support of this contention was that every supply of output created an equivalent demand for output so that there never could be a problem of general over-production and that if there was any unemployment it was because of hinderances placed in the working of the freely competitive price system by artificial monopolistic action on the part of trade unions, employers or the government. Now it is true that supply does create a demand for goods and services because various factors of production earn their incomes in the process of production by helping to create additional supply of output. When factors of production are employed to produce cloth, they get their reward in the form of wages, rents, interest and profit. But from this it does not follow that the entire supply of national output will always be demanded by them. The incomes of the factors of production are necessarily equal to the value added in the productive process but it does not mean that the entire income will be automatically spent on goods and services created in a given time period. A part of income will be saved so that this part of income is not available to create demand for goods and services. Unless, investors are willing to invest to an equivalent extent of intended savings, the total effective demand which consists of demand for consumers' goods and producers' goods (C+I) will not be sufficient to absorb the entire available supply of output. And if it happens like this, producers will not be able to sell their entire output, their profits will fall and they will reduce their production and this will create unemployment.

In a given time period, consumers are planning to spend a given part of their income and save the rest. Similarly entrepreneurs are planning to invest in factories, machines etc. to a given extent. The total effective demand is the sum of consumption and the investment demand. Savers are saving for different reasons than the investors and in a private enterprise economy there is no mechanism to ensure that what savers are planning to save is just equal to what investors are planning to invest. If there is any discrepancy between planned saving and planned investment, there will be changes in the level of output, income and employment to correct this discrepancy. If planned investment is greater than planned saving, the current output will not be sufficient to meet the emerging demand and hence income, output and employment will increase and *vice versa*. Thus we see that the basic weakness of Say's law arises because of lack of any agency to ensure that intended savings are just equal to intended investment and that since savings and investment are undertaken by different persons and for different reasons a discrepancy between the two is bound to arise and when it arises the necessary mechanism to correct it is through changes in the volume of employment and income.

6. The Determinants of the Volume of Employments—Investment. We have seen that in the Keynesian world employment depends upon effective demand. There are two constituents of effective demand—investment and consumption. Of the two investment is more volatile and unpredictable as well as more strategic variable, At this stage it should be noted that the meaning of investment here is different from the common use of the word. One often hears of a person investing money in buying shares of a company. This is not the meaning in which we are using the term in this chapter. Here by investment, we mean any addition to the nation's physical stock of capital like the building of new factories, new machines as well as any additions to stock of finished goods or the goods in the pipelines of production. Investment can be undertaken both by private persons as well as the government. Thus when a person buys a share in the company, what takes place is only a financial transaction, what one person invests the other who sells the share, must have disinvested so that there is no net addition to the nation's stock of capital.

As we have said above, investment is a more volatile variable determining effective demand than its other constituent *i.e.*, consumption spending. What induces businessman to undertake investment ? On this subject has arisen a complicated theory of investment decisions but there is no unanimity among the economists regarding the real determinants of private investment. We do not propose to discuss it here. But obviously, profit expectations seem to exercise a major influence on investment decisions of businessmen and these profit expectations in turn are influenced by the current and the expected level of economic activity, changes in techniques etc.

7. The Consumption Function. *Average and Marginal Propensity to consume and save.* As regards consumption spending of the people, it is influenced among others by the following factors :—

(*a*) the real income of the individual,

(*b*) his past savings,

(*c*) rate of interest.

Of these, the influence of real income seems to be the strongest of all. For a great majority of people, past savings are very small and they too are for specific purposes. Therefore their influence on current consumption seems to be negligible. The rich who have sufficient savings can satisfy their current needs adequately out of their current incomes, hence their consumption spending is not greatly effected by their past savings. As regards an increase in the rate of interest, it may encourage some people to save more because the saved money now earns a higher rate of interest but if a person is saving for some specific purpose a given sum at a future date, an increase in the rate of interest enables him to accumulate the given sum with lower current savings. Suppose, I need 105 rupees at the end of one year. Now if the rate of interest is 5 per cent, I have to save 100 rupees, but if it is more than 5% I need save less than 100 rupees. This leaves income as the major determinant of consumption spending.

The relationship between income and consumption is measured by the average and the marginal propensities to consume. The average propensity to consume is a relationship between total consumption and total income in a given time period, while the marginal propensity to consume measures the incremental change in consumption as a result of a given increment in income. Thus

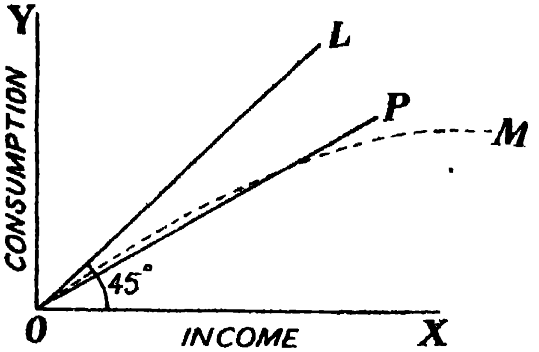
$\text{APC}=\frac{C}{Y}$. where C—consumption

Y—income.

$\text{MPC}=\frac{\Delta C}{\Delta Y}$ ΔC—is incremental change in consumption

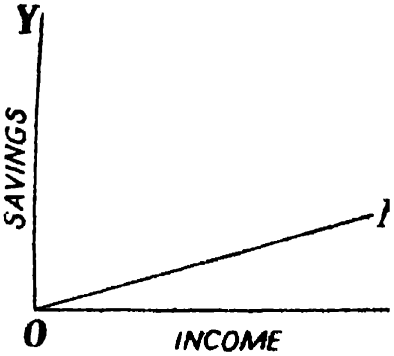
ΔY ,, ,, ,, in income.

The normal relationship between income and consumption is such that when income rises, consumption also rises, but by less than the rise in income. In other words, in normal times, the marginal propensity to consume is less than one.



I

Fig. 63.



II

Fig. 64.

Income	*Consumption.*	*Saving*
100	75	25
120	90	30
140	105	35
180	135	45
220	165	55

The figures of the above table have been plotted in the accompanying diagram Fig. 63 where income is represented on the X-axis and consumption on the Y-axis. OL is the line which makes an angle of 45° with both the axes and any point on this straight line will be equi-distant from both the axis. Should the income-consumption curve coincide with this line, it will mean that the marginal propensity to consume is equal to one which is not normally true. Hence the income-consumption curve OP lies below the 45° line through its entire length. The marginal propensity to consume will be measured by the tangent of the angle that the income-consumption curve makes with the X-axis, *i.e.*,

$$mpc=\tan\angle POX$$

The curve as we have drawn turns out to be a straight line rising from the origin, which means that the marginal propensity to consume is constant throughout. This, however, need not be so and the curve may well become flatter as income rises, for as more and more consumption needs have been satisfied, a greater share of an increase in income than before may be saved. The dotted curve OM represents such a relationship showing that as income rises, marginal propensity to consume becomes smaller and smaller. In some cases, the income-consumption curve may not rise from the origin but from farther left showing that when income is zero, consumption is not zero and that the individual is living on his past savings. These complicated cases, however, we are not going to consider. From individual consumption-income relation we can construct a consumption-income curve for the economy as a whole.

Savings Curve. The income-consumption relation can be used to derive also the saving-income relation, for income not consumed is income saved (See the table above). Now plotting savings on Y-axis and income on X-axis we get the savings income curve ON in diagram 64. Savings corresponding to a given level of income can also be read off from the distance between a point on income-consumption curve and corresponding point on the 45° line (Fig. 63). Just as the marginal propensity to consume is measured by the slope of the income-consumption curve, similarly the marginal propensity to save is given by the slope of the income-saving curve. Marginal propensity to save is the increment in savings caused by a given increment in income.

$$mps=\frac{\Delta s}{\Delta y}$$

$$=1-\frac{\Delta c}{\Delta y}$$

$$\text{APS}=\frac{S}{Y}=\frac{\text{total saving}}{\text{total income}}$$

8. **The Concept of Multiplier.** With the help of marginal propensity to consume, we can express in a systematic manner the relationship between a given increment in investment and the resulting change in income. Suppose on a given day an investment of 100 rupees takes place. Now the first impact of this change will be that incomes of persons engaged in investment activity will go up by 100 rupees. The process, however, does not end there. The recipients of incomes will spend a part of their additional income and save the rest—the magnitude of their additional spending will depend on their marginal propensity to consume. Suppose it is $\frac{3}{4}$. Then they will spend 75 rupees and save 25 rupees. When they spend these 75 rupees in buying goods and services, the incomes of the sellers of these goods and services go up by Rs. 75. They in turn will spend a part of its depending on their marginal propensity to consume. If their marginal propensity to consume is also $\frac{3}{4}$, they will spend 56·25 rupees and save the rest. Thus one primary round of expenditure creates income much higher than the original amount. If the marginal propensity to consume is stable, the series of successive expenditures become a geometric progression.

$$100+100\times\tfrac{3}{4}+(100)(\tfrac{3}{4})^2+100\times(\tfrac{3}{4})^3+100\times(\tfrac{3}{4})^4$$

$$\begin{aligned}
\Delta Y &= 100\{(1+\tfrac{3}{4}+(\tfrac{3}{4})^2+(\tfrac{3}{4})^3\}^2\\
&= 100\left(\frac{1}{1-\frac{3}{4}}\right)\\
&= 100\times 4\\
\Delta Y &= 400 \text{ rupees.}
\end{aligned}$$

Thus we see that an initial, primary investment of 100 rupees gives rise to an increase of 400 rupees of the national income. The *investment* multiplier measures the relationship between an increase in income caused by a primary increase in investment.

$$\text{Investment Multiplier} = \frac{\Delta Y}{\Delta I}$$

$$\text{In the above case multiplier} = \frac{400}{100} = 4$$

We observe from the above that the multiplier is given by the following formula.

$$\text{multiplier} = \frac{1}{1 - mpc}$$
$$= \frac{1}{mps}$$

where *mpc* is marginal propensity to consume and *mps* is the marginal propensity to save.

The *employment multiplier* similarly is the measure of the total increase in employment caused by a given primary rise in employment. Primary employment like an act of primary investment refers to the original round of employment created by a given increment of investment. With the help of the multiplier, we can state in precise quantitative form the relation between investment and income. Originally the innovation of R.F. Kahn, is figured prominently in Keynes's General Theory of Employment, Interest and Money.

9. **Equilibrium Level of Income and Employment.** We have discussed above that effective demand is the major determinant of output and employment in the Keynesian system. Effective demand has two constituents—consumption and investment. Let us suppose that the rate of investment is given. Where will then the equilibrium level of income be ? It will be at that level of income where given the marginal propensity to consume, savings equivalent to increment of investment are forthcoming.

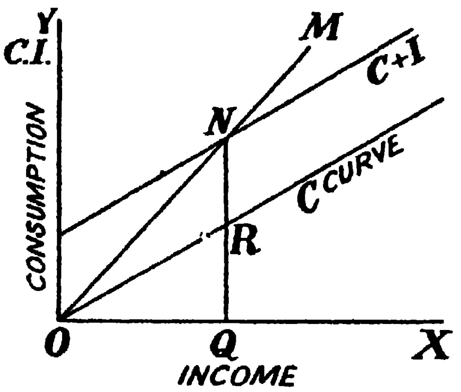


Fig. 65.

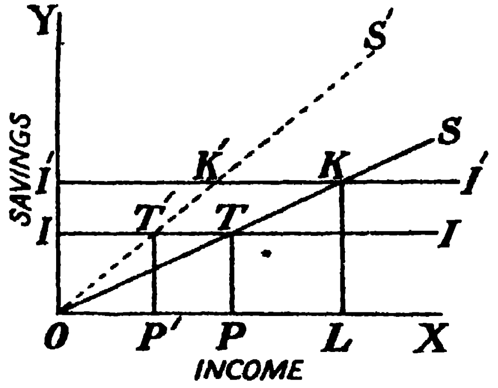


Fig. 66.

In Fig. 65, C represents the income-consumption curve and C+I represents the consumption plus investment curve (investment being constant at all levels of income, C+I curve is parallel to curve C). The equilibrium level of output will be at the front where C+I curve intersects the 45° line. At the point N in Fig. 65, C+I curve intersects the 45° line and OQ is, therefore, the equilibrium level of output. The equilibrium is possible at N alone because only at this point the sum total of consumption and investment spending generates sufficient demand to lift the output being supplied. At N alone, savings (NR) out of income OQ(=NQ) are equal to the current rate of investment.

The same thing can be proved with the help of the savings-income curve (Fig. 66). II—represents the fixed level of investment and curve OS the income-saving relation. Equilibrium level of income lies at the point T, for here alone savings (PT) out of income OP are equal to investment OI. Hence the equilibrium of output and employment lies at the point where savings are equal to investment.

What happens if the investment rises from II to I'I' (Fig. 66). Income will rise from OP to OL, the new equilibrium will be at the point K. At this level of income, saving (KL) is once again equal to investment (OI'). Thus an increase in investment by leading to an increase in income via the multiplier process generates equivalent additional savings.

What happens if there takes place an increase in savings, signified by an upward shift in the S curve (Fig. 66) to OS' (dotted line). Now with OI' of investment the equilibrium level of income is OP' and not OP. Thus if the world is suffering from the deficiency of effective demand, and unemployment, the best way to increase income and employment is to increase the rate of investment. An attempt at spending less and saving more will lower the value of the multiplier and, therefore, reduce rather than increase the level of income. This remedy, the reader will remember, is in sharp contrast to the one we suggested for structural unemployment.

10. The Concept of Full Employment. The discussion which we have pursued above leads us on to the concept of Full Employment. Employment is said to be full when anyone who wants a job at the going wage rates can get it. Of course, full employment must not and cannot be understood to mean the absence of unemployment. For, some margin of unemployment is inevitable in any type of economy. First, there are some people who choose to remain unemployed for one reason or another and cannot be induced to take jobs, at least for a short time, no matter what the inducements are. Secondly, there are the people who leave one job in search of another and have to spend some interval of unemployment while they are on the move from one job to another. Then there are some people who, having left their old jobs, have to spend some time learning new ones during which they are on probation getting no remuneration or at most a meagre allowance. All such people may account for from 3 to 5% or even more of the labour force. Save for this margin, the rest of the effective manpower is available for employment. Employment is said to be full when this labour force, accounting for 95 to 97% of the aggregate manpower, is fully employed. Such a high level of employment is fully manifest in times of a total war. But then the problem is to attain it during times of peace. Indeed, this is the master problem of every free market economy.

11. Policy Regarding Unemployment. (*i*) If unemployment is due to the rate of growth of population being faster than the growth rate of the stock of capital, then emphasis must be laid on increasing the rate of investment and controlling the rate of population growth.

(*ii*) To deal with frictional unemployment, proper retraining facilities, employment exchanges and social security arrangements should be made.

(*iii*) For seasonal unemployment, suitable subsidiary occupations should be found out during the slack season.

(*iv*) If employment is not ' full ' because of deficiency of effective demand, attempts should be made to boost up effective demand. This can be done by giving more incentives in the form of tax reliefs and cheaper credit to private investment. Similarly efforts should be made to raise consumption by tax relief to individuals. If all these efforts do not prove sufficiently effective, the government can undertake public works programme so as to create additional employment.

What if employment tends to be 'overfull'? While in the 'thirties many advanced countries were faced with the problem of unemployment, in the post-war years they have often been faced with the problem of overfull employment causing inflation. In such a situation, the economy suffers from too much rather than too little demand and the remedy lies in reducing in an orderly manner the level of effective demand without creating excessive unemployment. A restrictive fiscal policy aimed at reducing the consumption spending ought to be adopted. Similarly, a stringent monetary policy with higher interest rates so as to bring down the rate of investment to a more manageable level ought to be brought into action to deal with a situation of over-full employment.

CHAPTER XLII

TRADE CYCLES

1. What is a Trade Cycle? The world has registered remarkable economic progress especially during the last 150 years. But it would be wrong to think that this economic progress has been on steady upward swing and a continuous movement forward. On the other hand, every business man knows that, after ten or twelve years, the production machinery receives a rude shock, which throws it out of gear for a number of years. There are upward swings and then downward swings in business. The periods of business prosperity alternate with periods of adversity. Every boom is followed by a slump, and *vice versa*. This is a trade cycle. The trade cycle simply means the whole course of trade or business activity which passes through all phases of prosperity and adversity.

A crisis, on the other hand, means a period of stress and strain when business men find it difficult to meet their commitments. In the words of Adolph Wagner, "Crises imply the overwhelming and simultaneous occurrences of inability on the part of independent entrepreneurs to pay their debts." Or in J.S. Mill's words, "There is said to be a commercial crisis when a great number of merchants have or apprehend they have a difficulty in meeting their engagements. It is a commercial crisis when only merchants are involved in a difficulty. But when it is accentuated and leads to bank failures it is called financial crisis."

2. Course of a Trade Cycle. Let us briefly trace the course of a trade cycle. We might start at a point when business is at the lowest ebb and depression is prevailing all round. The lucky ones, who are employed, get distressingly low wages. The purchasing power of money is high but that of man is low. The general purchasing power of the community being very low, the productive activity, both in the production of consumers' goods and producers' goods, especially the latter, is at a very low level. The world seems to have settled at a low level of employment and standard of living. The inefficient entrepreneurs are weeded out. The business settles down at a new equilibrium at a low level of prices, costs and profits. This is how the world adjusts itself to a depression and, the worst being over, the things somehow get going although the horizon is still gloomy. This new adjustment or equilibrium may last for a number of years.

But the things are not going to continue to be in a depressed state for ever. After the depression has lasted for some time, rays of hope appear on the business horizon. Pessimism gives place to optimism. The depression contains in itself the germs of recovery. Wages are low even for efficient workers, sufficient number of whom is now available. Money is cheap and so are the other materials and the factors of production. Prices may be low but the costs too are low. The costs fall so low during depression that they overtake the prices and a margin of profit reappears. This induces an entrepreneur, who may have sufficient financial backing, to take the risk. In order to steal a march over his rivals, he orders repairs, renewals and replacements and, perhaps, a new plant so that he may not be found napping when the market revives. His example is followed by others. Constructional and allied industries receive orders and re-employ labourers who spend their newly-acquired purchasing power on consumers' goods. This stimulates further investment and production in several other industries. Lo! the business has turned the corner. The long, dark tunnel is nearly passed and the bright end is just at hand.

Recovery once started gathers momentum. The slender stream of recovery, when it has started flowing, is strengthened by numerous tributaries on its way. The revival of investment in one industry leads to a revival in another. The wages paid to workers in one industry create demand for goods produced by another. With the general revival of demand, prices show an upward trend. The businessman's income takes a forward jump while wages, interest, and other costs lag behind. Profit margins are thus widened. Optimism grows and spreads far and wide. The banks know that profits are being made and they do not mind giving advances. Credit expands. Business men borrow and plunge deeper into business so long as the expected rate of profit exceeds the prevailing rate of interest. Exceptional business prosperity turns their head, and they indulge in over-trading. Everybody is feverishly busy in making money. This phase of the trade cycle is known as boom and it may, like depression, last for a number of years.

But just as depression created the conditions for recovery, similarly the boom conditions generate their own checks. All idle factors have been employed and further demand must raise their prices, but the quality available now is inferior. Less efficient workers have to be taken on higher wages. Rate of interest rises and so also of the necessary materials. The costs have after all started the upward swing. They overtake prices ultimately and the profit margins are first narrowed and then begin to disappear. The boom conditions are almost at an end. The bankers feel uneasy over their advances. They throw sinister hints that the loans may be recalled. The outlook is no longer optimistic.

Then starts the downward course. Fearing that the era of profits has come to a close, businessmen stop ordering further equipment and materials. The prudent businessman wants to get out altogether and cuts down his establishment ruthlessly. The Government applies the axe mercilessly. The bankers insist on repayment. The 'bottlenecks' appear; stocks accumulate. Desire for liquidity increases all round. This accentuates the depression. Just as the recovery is self-reinforcing, the forces of depression are also self-accumulating. Everybody is shifting for himself. A scramble for liquidity ensues. Some firms are forced into bankruptcy. The failure of one firm creates difficulties for those with whom they have business connections. Gloom spreads. There is a general distress. This phase of the trade cycle is known as the crisis—a point of critical convulsions.

The crisis is the period of utmost suffering for businessmen. But they recover in course of time from the stunning blow. Their commitments are liquidated somehow and business enters into the stage what has already been described as depression or slump or a state of stagnation. Lord Overstone describes the course of a trade cycle thus: " state of quiescence—next improvement—growing confidence — prosperity — excitement — over-trading — convulsion—pressure—distress—ending again in quiescence."[1]

To use Mitchell's terminology we can mark four distinct phases of a business cycle, *viz.*, Expansion (upward movement), Recession, Contraction (downward course) and Recovery. The following figure represents these four phases :

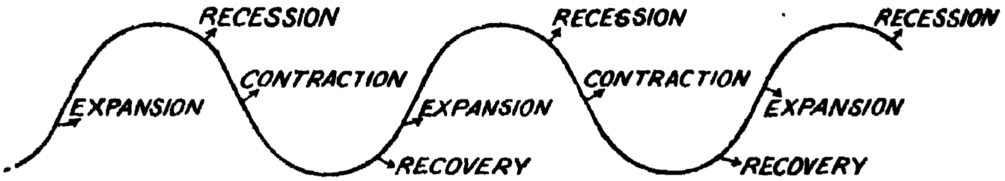


Fig. 63.

3 Characteristics of a Trade Cycle. A study of trade cycles has revealed two important characteristics : (1) Its cyclical nature, *i.e.*, *periodicity*, (2) its general nature or *synchronism.*

It has been found that trade cycles occur periodically at fairly regular intervals. The interval is not a precise one but the degree of regularity is sufficient to demonstrate the periodicity of a trade cycle. There is a general consensus of opinion that the cycle takes seven to ten years nearly to complete itself. No uniform duration can be expected but the upward and the downward swings are sure to follow each other as day follows night. Businessmen have developed such an uncanny insight that they know when to expect the one or the other—so high is the degree of periodicity exhibited by trade activity in modern times.

The second characteristic is synchronism or its all-embracing character. The business world is one economic unit, like a living organism. A pinprick in the foot of a man sends the shock throughout the system. So it is in business. An attack on one part of the business organism is bound to send a shock to the other parts. If one firm is in grief, those who deal with it cannot remain unaffected, and they in turn will affect others with whom they may be in commercial intercourse. Thus depression passes from one industry to another. Failure of some firms spells failure to others. Just as optimism is catching and one industry assists in, and stimulates the recovery of others, in the same way is pessimism infectious and a gloom in one industry invariably spreads gloom to other industries in close business proximity to itself, and so on. The chain lengthens and the gloom deepens. The time comes when all industries in all districts and all firms in the country are engulfed. Few can escape the deluge.

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[1] Quoted by Marshall in *Money, Credit and Commerce*, p. 246.

The report of the American Economic Association on business cycles brings out the following common features of the trade cycles :—

(*i*) With the exception of agriculture, prices and production move in the same direction.

(*ii*) The total expenditure on capital goods and durable goods fluctuates much more widely than that on non-durable and consumption goods. Hence there are much wider fluctuations in industries engaged in the production of capital goods and durable goods.

(*iii*) Current expenditure on business inventories fluctuates by a greater percentage than total sales.

(*iv*) Changes in the volume and velocity of money (both currency and bank money) vary *directly* with changes in total output and employment.

(*v*) Prices of manufactured goods are relatively rigid, whereas those of farm products are relatively flexible.

(*vi*) Income from profits is more fluctuating than income from other sources.

THEORIES OF THE TRADE CYCLE

4. Modern Theory of the Trade Cycle : Introductory. Since the publication of Keyne's General Theory of Employment, Interest and Money, the theories of trade cycle have shown a great degree of convergence. Of course, even before Keynes, it was agreed that fluctuations in the rate of investment have something to do with the fluctuations in the level of activity yet a systematic exposition was lacking. In the previous chapter, we investigated the relation between a change in investment and the resulting change in the level of national income. This is the familiar theory of multiplier. The theory of multiplier tells us that changes in investment will bring about magnified changes in the level of income and employment. This helps us in understanding the relation between investment and income. But the theory of multiplier does not offer a full and satisfactory explanation of the trade cycle. As has been observed above, a basic feature of the trade cycle is its cumulative character both on the upswing as well as the downswing *i.e.*, once economic activity starts rising or falling, it gathers momentum and for a time feeds on itself. Thus what we have to explain is the cumulative character of economic fluctuations. The theory of multiplier does not prove adequate for this task. For example, suppose that investment rises by 100 rupees and that the magnitude of multiplier is 4. Then from the theory of multiplier we know that national income will rise by 400 and if multiplier is the only force at work, that will be the end of the matter, with the economy reaching a new, stable equilibrium at a higher level of national income. But in real life, this is not likely to be so for a rise in income produced by a given rise in investment will have further repercussions on the economy. This reaction we study in the theory of the accelerator.

5. Acceleration Principle. When income has risen by 400 rupees, people's spending power has risen by an equivalent amount. This will induce them to spend more on gords and services. When the demand for goods rises, initially this will be met by overworking the existing plant and machinery. All this leads to an increase in profits with the result that businessmen will be induced to expand their productive capacity, they will install new plants *i.e.*, they will invest more than before. Thus a rise in income leads to a further induced increase in investment. The accelerator is the numerical value of the relation between an increase in income and the resulting increase in investment.

An example will make the working of the accelerator clear. Suppose that we are living in a world where the only commodity produced is cloth. Further suppose that to produce cloth worth 100 rupees, we require one machine worth 300 rupees, which means that the value of the accelerator is 3 *i.e.*, if demand rises by 100 rupees, additional investment worth 300 rupees takes place. If the existing level of demand for cloth remains constant, let us say, at 500 rupees then to produce this much of cloth we need 5 machines worth 1,500 rupees. At the end of one year, let us suppose, that one machine becomes useless as a result of wear and tear so that at the end of one year, a gross investment of 300 rupees must take place to replace the old machine in order that the stock of capital is capable of producing output worth 500 rupees.

	Demand for cloth in rupees 1	Needed stock of capital 2	Replacement expenditure 3	Net investment 4	Gross investment (3+4)
Period 1	500	5 machines=1500 rupees	1 machine=300 rupees	0	300 rupees
Period 2	500	5 machines=1500 rupees	1 machine=300 rupees	0	300 rupees
Period 3	800	8 machines=2100 rupees	1 machine=300 rupees	3 machines =900 rupees	1200 rupees
Period 4	1000	10 machines=3000 rupees	1 machine=300 rupees	2 machines =600 rupees	900 rupees
Period 5	1000	10 machines=3000 rupees	1 machine=300 rupees	0	300 rupees
Period 6	800	8 machines=2400 rupees	1 machine	-2 machines =600 rupees	—300 rupees

In the third period demand rises to 800 rupees. To produce output worth 800 rupees, we need 8 machines. But our previous stock consisted of only 5 machines. So if we are to produce output worth 800 rupees, we must install 3 new machines, worth 900 rupees. In addition, since at the end of one period one old machine has become useless, even to maintain the previous stock of 5 machines we need to install one new machine in place of the old one. Thus net investment will be of 900 rupees and replacement investment 100 rupees so that our gross investment rises from 300 rupees in period 2 to 1,200 rupees in period 3. A 60 per cent rise in demand gives rise to 300 per cent increase in investment. Here we have a glimpse of the powerful destabilising role of the accelerator.

In the fourth period, demand rises from rupees 800 to 1000 rupees but total investment is only 900 rupees. In the fifth period, even though demand remains constant at 1000 rupees, gross investment falls to 300 rupees while net investment falls to zero. Thus in order to keep the economy prosperous, mere standing still or running at a slow pace is not good, we must run and run faster and faster in order to ward off the danger of a depression. This is because of the extremely destabilising role of the accelerator.

6. Interaction of the Multiplier and the Accelerator. In the acceleration principle we find a powerful explanation of the destabilising forces working in the economy during a trade cycle. If the accelerator is the only force at work, then we will have too much of instability in the economy—more than is actually found. In real life, we find that there are limits to instability both in the upward as well as the downward direction so that the trade cycle must have a peak as well as a bottom. That this instability is confined to these two limits is partly due to the working of multipler. In real life, the multiplier and the accelerator both are at work and the trade cycle is the result of their interaction. Investment generates income *via* the multiplier and this income further generates additional investment *via* the accelerator and so the process gathers a cumulative momentum.

The simple crude type of accelerator (as the one we have used in the above example) has come in for a food deal of criticism in recent years. For example, it has been pointed out by Kaldor that we cannot assume a constant value of the accelerator throughout the trade cycle; that it is not true that an increase in demand of 100 rupees must always give rise to an increase in investment of 300 rupees (as in our example). This is because if already some machines are lying idle we will try to use them before rushing in for new equipment. Also, if our expectation is that the rise in demand is a temporary one, we will try to meet it by overworking the existing machinery rather than installing a new plant. Further, it may be easier for a firm to take advantage of small increase in demand than big ones—for the financial resources of a firm may not be sufficient to take immediate advantage of big increases while small additional equipment is not likely to strain its financial resources to any great extent. Hence its response to the latter may be quicker than the former. Thus the simple type of acceleration principle turns out to be a crude instrument for the value of the accelerator will vary at different stages of the trade cycle. But this does not mean that the basic principle underlying the acceleration principle is wrong. It is based on a sound principle that a change in national income will tend to induce corresponding additional changes in the rate of investment.

7. Modern Theory of Trade Cycle Further Explained. The modern theory seeks to explain the trade cycle primarily by reference to the real forces as contrasted with the purely monetary explanations to be found for example in Mr. Hawtrey's theories. We have seen above that the multiplier and the accelerator are two wings of the modern theory and their interaction leads to the emergence of the trade cycle. To explain how it works we will start with the expansionary phase of the cycle.

During the expansionary phase, income and output are expanding and the cumulative process fed by the interaction of the multiplier and the accelerator leads to an increasing level of income and output. During this phase, demand is strong and profit expectations are good. Excess capacity prevailing during the slump is gradually disappearing. Therefore expansion proceeds at a rapid rate.

Soon expansion enters the boom stage. For a time, economic activity is stable at its higher level. But it carries within it the seeds of its own destruction. The boom may be destroyed by any one of the following reasons or all of them working in combination :—

(*i*) During the phase of expansion, investment has been undertaken at a rapid pace. After some time, when this investment bears fruit, it adds greatly to the productive capacity or the stock of capital. This excessive addition to the stock of capital depresses the profit expectations of entrepreneurs and they decide not to invest more. When this happens, the multiplier and the accelerator are working to create a cumulative downswing and from recession the economy lapses into depression.

(*ii*) When investment activity is booming, the prices of investment goods start rising once bottlenecks arise in the supply of investment goods. This raises the costs of production and depresses profits so that in the next period there is less investment than before.

(*iii*) There may be general full employment. When the economy hits the full employment ceiling, the maximum possible rate of expansion cannot exceed the rate at which the ceiling itself is expanding as a result of growth of population and productivity. Thus when the economy hits the full employment ceiling, the value of the accelerator is reduced. This weak accelerator cannot keep the economy running along the full employment ceiling and sooner or later the economy must bounce downwards.

(*iv*) As income rises progressively during the upswing, there takes place a shift in income distribution in favour of profits. Now the marginal propensity to consume out of profits is lower than that of wage-incomes so that the marginal propensity to consume of the economy falls. This lowers the value of the multiplier so that a given rate of investment generates smaller income than previously. Thus the demand for goods does not expand as fast as the supply of goods so that after some time businessmen unable to sell their output and incurring losses cut back their investments.

(*v*) During the boom, the financial system becomes over extended and the reaction of the banking system to monetary stringency is to raise the rate of interest and call back some of the loans advanced to business firms. This creates a sort of panic in the financial markets which later on spreads to other branches of economic activity.

Once the boom has collapsed, the economy is in the midst of a recession. Now the multiplier and the accelerator are working in a downward direction. The downward phase is further intensified by the violent reaction of the banking system to the financial crisis. To safeguard their liquidity position, the banks further raise the interest rates and recall their loans at a time when business firms are not in a very strong financial position. This adds fuel to the fire and there are a large number of bankruptcies.

Sooner or later, economic activity stops declining any further. This is because of the character of disinvestment process. If income falls, investment also falls but in a given time period, the maximum possible disinvestment is limited by the extent of replacement investment. The only possible way of disinvestment is not to replace the old equipment when it becomes worn out. Thus after some time, the value of the accelerator becomes almost zero. When that stage is reached, no further disinvestment is possible and hence the level of activity stabilises for a while at that level.

At this stage, there is lot of excess capacity in the system. But over a period of time, this excess capacity is disappearing and a time must come when to maintain the stock of capital even at a lower level, replacement investment is necessary. When gross investment rises from zero to a positive level, the economy is on the way to recovery. However, the recovery may come earlier than this. For in the meanwhile, there may be technical progress going on in the economy and some progressive firms may find it profitable to take to these innovations. Their success stimulates others also and in this way the recovery phase merges into expansion. This process is often facilitated by the easy money conditions in the financial markets.

8. Remedial Measures to Fight Economic Crisis. Lack of unanimity as to the policy to be followed in a crisis is even more marked than the lack of unanimity about the causes thereof. For a complicated malady no simple remedy can be prescribed. Most of the economists are agreed that under the existing economic order crises are unavoidable ; you can only delay them or mitigate their severity when they come. We need, therefore, two sets of measures : the *preventive* and the *curative*.

For preventing or avoiding crisis, the remedy will depend on the diagnosis. Influences of climatic factors on the supply of raw materials cannot be ruled out altogether. In a country like India, where nearly two-thirds of the people depend on agriculture, it is necessary that dependence on rains should be removed as far as possible so that agriculture no longer remains a gamble in the monsoons. A network of canals, wells and reservoirs may be provided to ensure an adequate and regular supply of water. Other external factors like wars, earthquakes, and epidemics cannot be provided against. They do not, however, play an important part in a trade cycle. At any rate, they do not occur with any degree of regularity.

Imperfect adjustment of demand and supply can be rectified by collecting and disseminating correct and up-to-date statistical information about the condition of crops, quantities of goods produced by the main industries, state of employment, imports and exports, *per capita* income price and cost of living index numbers and of company floatations and profits, etc. This will help the businessman to form an intelligent forecast of the probable changes in the demand for, and supply of, certain types of goods. The intelligence bureau may issue directives and warnings from time to time so that undue pessimism or optimism is nipped in the bud. In the boom period, the companies may be asked to follow a cautious policy in the distribution of dividends and to build up reserves.

Monetary Policy. The above-mentioned preventive measures will not, however, be enough. Besides these, a country must always formulate and follow an appropriate monetary policy to avoid the occurrence of booms and slumps. If they still come about, monetary weapon must be wielded, to mitigate their severity and also to restore economic stability as early as possible.

Monetary policy embraces banking and credit policy relating to loans and interest rates as well as the monetary standard and public debt and its management. It influences the volume of credit base and, through it, the volume of bank credit and thus the general level of price and of economic activity. The usual methods through which it works have already been discussed in an earlier chapter. By way of recapitulation, the important ones among such methods are : manipulation of bank rate and open market operations. When boom conditions are developing, bank rate is raised and thus credit is contracted with the consequent brake upon the undue expansion of business activity. In a depression, a policy of *cheap money* may be adopted to stimulate business investment and thus assist recovery.

The bank credit policy involves two types of controls : the quantitative and the qualitative. The quantitative control is aimed at *general* tightening or easing of the credit system as the situation may demand. It is exercised by influencing the reserves of the banks. The qualitative control seeks to regulate *particular* type of credit. Its object is to stimulate, restrict or stabilise bank advances for specific business schemes. In recent years, the Reserve Bank of India has been following a policy of selective credit control.

Obviously, monetary policy has much to commend itself and was, therefore, rightly regarded, till two decades back, as the best anti-cyclical instrument. But we have already seen the limitations of the policy relating to the bank rate and open market operations.[1] Its success will depend on how far certain assumptions are true. For example, how far the various members of the banking system are prepared to accept the lead given by the central banks ; how far the banks can make their borrowers use their credits for purposes for which such credits have actually been created ; further, how far monetary causes are responsible for the economic fluctuations ; and still further, and most important, whether the business community will adjust their investments exactly in accordance with the altered rates of interest.

Thus, since these assumptions are only partially true, it is understandable that monetary management can claim only limited efficacy. The most serious limitation is in periods of depression when the business community is so completely in the grip of pessimism that even a substantial reduction of the interest rates does not make them embark upon expansion of production and new investments. The horse may be taken to water, but it may refuse to drink. The monetary authority can only *encourage* business enterprises. The only result of lower interest rates may be to create a state of liquidity. The existence of a huge public debt has also blunted the edge of monetary control. For the sake of their own solvency, the banks must keep the prices of bonds stable. Hence modern expert opinion is not inclined to place much reliance on the monetary policy as a tool for keeping economic activity in proper trim.

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[1] Chapter XXXVI.

Fiscal Policy. The inadequacy of monetary policy led, therefore, to the search for suitable supplementary methods. Fiscal policy was the most important new find. But, for reasons to be explained presently, this new method, though it was "designed to supplement and strengthen monetary policy, has ended up by threatening to supplant monetary policy altogether." (Williams). Since public expenditure in all modern States constitutes a fairly respectable proportion of the total national income, fiscal policy is bound to affect the level of prices, production and employment irrespective of the fact whether this policy is deliberately aimed at this or not.

Fiscal Policy, broadly speaking, consists of: (*a*) *Public spending or a policy of public works*, and (*b*) *appropriate taxation*.

We have already seen that according to Keynes' explanation. trade cycle is primarily caused by a disequilibrium between saving and actual investment. So, if the capital outlays of the State and public bodies could be adjusted to the varying private (business) investments, disequilibrium can be prevented from arising, and thus economic stability secured. And if disequilibrium has somehow come about, it can be rectified by adjusting public spending. Public spending has thus to be varied according to the exigencies of the business situation. In a year of depression, that is, when private investment is at a low ebb, the deficiency in investment will have to be made up by large capital outlay by the State and conversely, during the upward swing of the cycle, the State will have considerably to cut down its spending programme. Thus, during the depression years, the State must be ready to spend beyond its current revenues. In other words, the State should be prepared to have deficit budgets during depression. Conversely, there should be surplus budgets during the years of prosperity. To put it in another way, instead of having balanced budgets every year, the State should aim at budget-balancing over a series of years.

On the revenue side; rates of taxes should be lowered during depression, while they should be raised during boom years. To stimulate business investment during depression not only the rates of taxes should be lowered but also more liberal allowances for depreciation and obsolescence, etc., should be granted.

Thus fiscal policy, which is also called the contra-cyclical management of public finance, may be operated both through public revenues and public expenditure. Between these two, the expenditure method is far more effective in stimulating business activity. Moreover, the revenue method leaves the entire initiative to the business community and is also not capable of directing expenditure into channels which may be particularly desired. However, best result will be achieved if both of them are combined.

Public spending or public works policy, in view of its greater efficacy, deserves rather a detailed treatment. We shall begin with its *theory*. When during depression, economic activity is at a low ebb, and consequently there is considerable unemployment, the propensity to consume is naturally less. One important thing (apart from lowering the rate of interest) is to increase this propensity to consume. If somehow some additional employment could be created by starting public works and thus purchasing power increased through the wages paid to the newly employed, propensity to consume will rise and, in turn, stimulate private business investment, on the principles of multiplier and acceleration. The Government expenditure on its public works will thus have brought about many times greater general investment and thus contributed greatly towards all-round economic recovery. The public works expenditure of the State will have thus performed the function of '*priming the pump*' of economic activity in a country.

This is to fight a depression when it has already occurred or is developing. But there is another function that public spending programme may be made to perform, namely, that of stabilizing economic activity over a long time and making it free from booms and depressions. This long-term aim it can be made to achieve, as has been mentioned already, by constantly and appropriately adjusting public investment to the changes in private investment. This function is called the '*compensatory action*' of the fiscal policy. In the words of the American Economic Association, " In a system where the great majority of workers are in private employment, government stabilisation policy consists primarily in altering the general economic climate so as to mitigate or offset developing fluctuations in private business." Among the measures that a government may adopt to even out cyclical fluctuations, their report mentions the following :—

1. Alteration in tax rates and in the design of tax structure to bring about changes in incentives to individuals.

2. Change in government contributions to the income stream through transfer payments, *i.e.*, employment benefits, etc.

3. Change in public expenditure on public works and other government purchases.

4. Monetary control to bring about a change in the cost and availability of bank credit.

5. Public debt or monetary policy to bring about changes in the financial assets and liabilities of the public.

6. Timely announcement of a clearly defined government policy with a view to influencing investment decision as well as those relating to current scheduling of output and employment.

7. Measures affecting price-making and wage-fixing machinery.

8. An appropriate international economic policy.

Two strategic principles have been recommended for the achievement of economic stability.

(1) Government tax revenue should be higher relative to government expenditure in periods of high employment than in periods of substantial unemployment.

(2) Money and credit should be relatively tight in periods of high employment and relatively easy in periods of substantial unemployment.

Complete unanimity is, however, still lacking amongst economists regarding the merits of public spending policy as a means of securing continuous equilibrium between saving and investment. As against this, all are agreed about the great utility of fiscal policy in regard to its narrower, but surer application, for combating cyclical fluctuations when these have already occurred.

Apart from the infinite gain in assisting investment during depression, public spending or public works policy during such a period will enable the State to complete such works at much lower cost. Wages, prices and interest rate during depression are all low. Moreover, the *net* expense by the State is lower still. After all, if such schemes are not undertaken, unemployment 'doles' would have to be paid. The net cost of public works is, therefore, their total cost *minus* the unemployment 'doles' which would have otherwise been paid.

The limitations of fiscal policy must not, however, be lost sight of. To begin with, many of the public works may be non-

in time. Some of them cannot wait for depression to set in. Most of them are directly connected with the general business movement, rather than being used as corrective. Then, owing to immobility of labour, the policy may fail in creating additional employment. Road making, for example, cannot absorb the unemployed textile workers. Further, in a democratic State, the public may bitterly oppose heavily surplus budgets during periods of prosperity and may demand tax reductions. Moreover, sufficient care will also have to be taken to ensure that the spending by the State is in such spheres only which would have not been taken up by private investors, otherwise public investment does nothing more than merely replace private investment. Further, public spending should not increase the difficulties of private investors by raising the cost of construction materials and building labour, etc.

Notwithstanding these limitations fiscal policy is a powerful anti-cyclical weapon. Its efficacy will be further heightened if suitable monetary management is also combined with it. The two could be so devised as to be " mutually reinforcing." " In recovery from depression the deficit budgeting may play the larger role, both by creating new income directly, and by helping to implement an easy money policy, while in a boom, monetary policy could play an important and perhaps even the predominant role."

State Control of Investment In recent years, the economists have been advocating something farther than direct public investments for the purpose of counteracting business fluctuations. They urge that private investment should also be effectively controlled by the State for the same purpose. Control of private investment in certain countries dates from the 'thirties when it was adopted as an emergency measure. It was further extended and tightened during the War of 1939-45 by the belligerent countries and by some neutral countries as well. But then the object was the diversion of resources for war purposes. After the war, though such control of investment was relaxed, yet its role is being greatly emphasised by the economists as a permanent measure of economic stabilization. The danger of such a policy lies in this that too much State direction and intervention will hamper private enterprise. But leaving private investment entirely free is also not at all safe. A happy mean will have to be struck. Keynes was of the opinion that such a golden mean could be struck. When that is done, economic stabilization will become more practicable.

International Measures. So far we have been discussing individual national efforts at stabilisation. But trade cycle is an international phenomenon and no country is hermetically sealed from the rest of the world. In fact, this international aspect creates complications and makes crisis control all the more difficult.

The measures which are suggested to be adopted on an international scale are : *International Production Control, International Bull Stocks and International Investment Control.* International Production Control envisages control of production and prices of the important primary products. The difficulties of such control are indeed formidable, notably because agriculture in countries like India is usually carried on a small scale and more as a mode of living than as business, so that even though it ceases to be profitable, it will be continued. But production control as far as possible, combined with buffer stocks to counteract sudden changes in supply and demand will go a long way in preventing rise or fall in their prices which give rise further to serious fluctuations in the entire economy.

An international investment control for developing backward regions would help in raising the standards of living of their people and thus reduce the inequalities in the standard of living of different peoples. Such reduction in these inequalities is bound to strengthen the forces of stabilization. The I.B.R.D. and President Truman's Point-Four programme and the Colombo Plan are attempts in this direction.

These are some of the measures that can be adopted to alleviate suffering. But the world has not been able to discover any penacea or sovereign remedy for a commercial crisis. Nothing short of reorganisation of the economic system can provide against the recurrence of crises. These are by-products of capitalism and so long as capitalistic system of production continues such disturbances must take place. A planned economy or some form of socialism may remove such a contingency.

Even a Socialist State will commit mistakes about organisation of production. It will also have to anticipate demand. No human organisation can be infailiable, yet planning of the entire economic field will so co-ordinate the various economic activities that maladjustments will be a rare phenomena. Even when dislocations do occur, the vast resources of the State can easily meet such situations, No failure of individual firms or displacement of labour will take place ; losses can be easily borne. When the whole world was suffering from acute depression and unemployment during the early 'thirties no such dark clouds threatened the economic horizon of Russia. Planned economy seems to be the best way of not only preventing a crisis but also of fighting it.

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CHAPTER XLIII

PUBLIC ECONOMICS

1. Introduction. State is a political society. Its ultimate aim is the promotion of human welfare. As such State must take notice of the economic activities of its citizens. Of all activities those that are economic in character are most vital to human welfare. No State can, therefore, effectively and satisfactorily work towards its ultimate end by ignoring the economic activities of the individuals.

We cannot agree that the State is an end in itself. Some economists used to say that Economics was the handmaid of politics. But it is more true to say that politics is the handmaid of Economics. The economic aim—welfare of the people—is the more important aim and the political structure must be so shaped as to subserve this aim. For example, we want to remove poverty from India. The Indian constitutional set-up must be such as can help us achieve this aim. If economic planning is essential for the raising of the living standards of the Indian masses, the constitutional arrangements must make central direction of all phases of economic activity possible. That is how politics must be subordinated to Economics.

It is now generally recognised that State control and interference in the economic sphere are essential for promoting general welfare. It is realised that the State must step in to make economic activity orderly and fruitful. The State must ensure the optimum utilisation of the resources of the community.

2. Views on State Activity. It has been well said that "political theory has been conditioned by environments". As environments have changed, the political views about the proper sphere of State activity has also undergone a change. There has been a singular lack of unanimity among political thinkers about the extent and mode of State interference. We can broadly distinguish the following main types of political thought :

The Anarchists. They believe in the negation of the Government. They think that a stage would be reached when man will have been so much morally lifted that the Government would become unnecessary ; it will ' wither away.' The society will regulate itself. This is just a dream of political visionaries.

The Communists. On the other extreme are the Communists, who believe that, far from being eliminated, the State will be a live and powerful instrument for the achievement of economic ends. The Communists would subject economic activity of the individuals to minute supervision and regulation by the State. Everything will belong to the State and the Government will organise and direct all economic activity. The individual will be a mere pawn in the game. Some would call it economic serfdom. This state of affairs is yet beyond practical politics.

Between these two extreme views, there are two others which have actually shaped political policies. One of these views is represented by individualism or economic liberalism, and the second by collectivism.

The Individualists. The individualists regard State as an evil, though not a necessary evil. They believe that human welfare is best promoted if economic activity proceeds unhampered and unfettered by any State interference.

In the words of a French physiocrat, Francois Quesnay, "The surest guardian of internal and external commerce, the most exact and profitable to the nation and State, lies in the unlimited freedom of competition." Adam Smith in England preached the gospel of economic liberalism. According to this school, the government is to perform the bare minimum of functions. It is to be a police state, maintenance of law and order being its sole concern. There is no room for factory legislation and social security schemes. This view obviously ignores the reasonable needs of society.

Individualism has been discredited both as a political principle and as a guide for State action. The bases of individualism have been long exploded. Nobody now seriously believes that every individual understands his self interest or has the power to realise it. Even J.S. Mill, the staunch advocate of *laissez-faire*, had to recognize certain spheres of State interference. The struggle for life has become very keen. Almost the entire surface of the globe has been occupied and there is no room for "a man to move further as soon as he heard the bark of his neighbour's dog." Even the sea has become too over-crowded to "let every man paddle his own canoe." In the world of today, there is hardly any room for the 19th century "rugged individualism." The day of the individualist is definitely gone. In the words of a poet:

"The Moving Finger writes; and having writ,
Moves on: nor all your Piety nor Wit
Shall lure it back to cancel half a line
Nor all your tears wash out a word of it."[1]

The Collectivist or the Socialist View. The collectivists and the socialists hold entirely different views. They emphasize the interests of Society as distinguished from the rights and the privileges of the individuals. Far from considering the State as a necessary evil, they regard State as a very useful and desirable institution and they would heap on its vast and almost unlimited powers. They would justify all interference by the State if it helps to promote social welfare. There is no limit to State interference provided it adds to human welfare.

There is a strong swing towards socialism or collectivism in the modern view about State activity. The statesman of today places no limitation on the authority of government to interfere in the economic sphere. The sole criterion is whether State activity directly or indirectly is conducive to the benefit of the society. Leon Duguit says, in his *Law in the Modern State*: "Whatever is essential to the smooth running of society is a public service."

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1. *See* Samuelson, P. A.—*Economics*, 1948, pp. 152-53.

For some time financial considerations governed State action. Profit was the touchstone. All State activity hinged on the question "Does it pay ?" The following passage excellently sums up this attitude[1]:

"J. M. Keynes has called the nineteenth century an accountant's nightmare. No work is to be done unless it 'paid'; every activity was subordinated to financial calculations. We built slums because they paid better than decent houses; we disfigured the countryside, wasted our great river basins, razed our forests, partly from ignorance but mostly because it 'paid' for the moment. We would not put the unemployed to work on public improvements because it did not pay. We have to remain poor because it does not pay to be rich. We have to live in hovels not because we cannot build palaces but because we cannot 'afford' them. This rule of self-destructive financial calculation governed every walk of life."

This was indeed a tragic handicap but has been almost luckily removed now. Even now financial considerations are not altogether irrelevant; but it is recognised that any public expenditure which seeks to develop natural or human material of the nation is justified and may be considered 'to pay'.

In course of time, governments have been forced by the logic of events to assume more and more functions, so that the sphere of State activity has constantly widened and become more and more diversified. The World War (1914—18) made a strong breach in the *laissez-faire* doctrine. The world-wide and unprecedented economic depression of the 'thirties called upon the governments everywhere to come out with bold economic policies. The U. S. New Deal touched every phase of economic life. The Second World War brought the State as a regulator of economic life to the forefront. State control and regulation have been extended to cover every aspect of economic life. It touches us as consumers and producers and not merely as citizens. And there is no going back. "Collectivism," says Chase, "is upon us, horse, foot and guns."[2] According to him, 70 p.c. of all Europeans are now living in the shadow of State-controlled enterprise and the question is merely: shall businessmen become rulers or rulers become businessmen ?

The modern economist has little scruples about limits of State activity. The governmental machinery is now being freely utilised to bring about an economical allocation of the resources of the community and to modify the existing distribution of wealth in a variety of ways. Either it is done directly by means of State enterprise or indirectly through a stringent control over private enterprise.

We can sum up the modern view in the following words: "It came to be recognised that the State has duties other than the provision of an army, a navy, and police, and that defence of quite a different kind was necessary. The community as a whole must unite to enforce right against might, to protect the economically weak against the economically strong, to prevent the exploitation of the poor by the rich, and to fight the evils of poverty and disease with

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1. Kinley—*Government Control of Economic Life*, 1936, pp. 11—20.
2. Chase, S.—*Government in Business*, 1935, p. 5.

their destructive effects upon the social and political order.''[1]

3. Functions of a Modern State. Different writers have offered different classifications of the functions of a State.

J. S. Mill gave a twofold classification : (*a*) Necessary functions providing security and justice ; and (*b*) optional functions including all the other functions. Adam Smith in his *Wealth of Nations*, published in 1776, mentioned three "duties of the Sovereign" in the chapter on "Expenses of the Sovereign or Commonwealth."

(1) "Defending the society from the violence and injustice of other independent societies ;

(2) "Securing internal justice between citizens ; and

(3) "Erecting and maintaining those public institutions....and works, which though they may be in the highest degree advantageous to a great society, could never repay the expense to any individual."

The following classification of the main functions of the modern State may be considered as fairly acceptable :—

(*i*) *Protective functions.* These functions include provision of security from external aggression and maintenance of law and order within the country. This is the primary function of a State.

This has been called unproductive activity by some writers. But this is not quite a correct view. No doubt this form of activity does not yield any material or tangible return in the narrow economic sense, yet in a broad sense and, indirectly, the activity relating to defence may be called productive. Unless a country is properly protected, no productive activity can be carried on.

(*ii*) *Administrative functions.* Besides the military and police force maintained for the defence of the country, every government maintains a host of administrative officials and agencies whose duty it is to administer the various departments. The administrative functions relate to the carrying out of the routine work of government.

(*iii*) *Social functions.* Under this head are generally included functions like the provision of relief for the poor, the sick and the unemployed. Social insurance, including health and unemployment insurance and the granting of old-age pensions, are now considered very essential functions of all civilized governments. Very comprehensive and ambitious schemes of social security, which aim at banishing want and fear from among the masses, are on the anvil in the leading countries of the world. Besides these, the governments of today provide museums, public parks, libraries, education, medical aid, decent housing facilities, etc.

These functions do not pay in the narrow sense of the word but are considered highly fruitful and productive from a broader point of view. They develop the natural and human resources of the nation.

(*iv*) *Economic and Commercial Functions.* In Economics, we are mostly concerned with these functions. They concern all government activity in connection with trade and industry. They include "the facilitating, encouragement, regulation and control of business."[1]

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[1] Thomas, W. E.—*Elements of Economics*, 1936, p. 599.

Let us see where government intervention is essential and what form it should take.

4. **Sphere of State Intervention.** State intervention in economic affairs is justified in the following cases :[2]

(i) *When the business is of a monopolistic nature.* Whenever there is monopoly, there is strong presumption of exploitation by the monopolist of the general body of the consumers. It becomes the duty of government to prevent this exploitation and the abuse of monopoly power. Government may have to exercise close supervision over the working of the monopoly and may have to go even to the length of fixing the price of the monopolised product.

(ii) *Where private enterprise would not be attracted.* This generally happens when no return on investment may be expected, *e.g.*, schools, hospitals roads, etc. Such enterprises cannot yield handsome dividends and must, therefore, be undertaken by the community collectively. Government must also step in where private enterprise is deterred because no return may be expected in the present generation. as in schemes of afforestation, anti-erosion, etc.

(iii) *Where the economically weak require protection.* The factory workers are in an extremely vulnerable position and must be protected by suitable legislation against the all-powerful employers. This is especially the case in sweated trades.

(iv) *In case of social monopolies or public utility services.* Railways. posts and telegraphs services, water supply and supply of electricity or gas are generally put under the category of public utilities. In such cases. it is obviously uneconomical and undesirable that there should be competing concerns supplying the service. Municipal or government control over these services is essential to ensure a regular and cheap service. This is, therefore, a fit sphere for government intervention.

(v) *Where the consumers need protection.* An average consumer is not considered competent to form a correct judgment about the quality or the purity of the commodity supplied to him. He is, therefore, not in a position to safeguard his interests. Government must come to his aid. We, therefore, find that laws against adulteration are on the statute book in all countries. Government intervention is considered essential for the protection of the consumers against the fraudulent practices of the producers.

(vi) *Where state management and control are dictated by political or social as well as economic considerations.* The obvious examples are the supply of currency and the manufacture of armaments. It is now recognised that the issue of currency notes by private agencies is fraught with serious risk to the whole community. State control and regulation of currency are absolutely essential if the economic machine is not to be thrown out of gear. Similarly, manufacture

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1. Thomas, S. E. *op. cit.*, p. 616.
2. *Ibid.*, p. 605.

and sale of armaments cannot be entrusted to private enterprise without being a menace to peace and tranquility in the country. Research on atomic energy is being kept a closely-guarded State secret.

5. State Intervention in Business. Let us now see how government activity is directed towards the assistance of trade and industry in the country. We may distinguish, broadly, the following chief methods of government assistance or intervention in business :—

(*i*) *Facilitating Business.* Government provides innumerable facilities for businessmen without which it will be almost impossible for them to carry on. Among the important facilities may be mentioned the provision of currency, means of communication and transport, fixing of weights and measures, passing of commerical laws, etc. All these facilities provide the necessary frame-work for the carrying on of trade and industry. We, in India, are not very well-equipped in these respects. Means of communication and transport are inadequate considering the area and the size of the population of the country. Banking and credit, too, are not well developed. These deficiencies are in no small measure responsible for our economic backwardness.

(*ii*) *Encouraging Business.* The provision of facilities mentioned above is hardly considered adequate in modern times. Such a passive attitude on the part of the State cannot ensure a measure of prosperity which a country can attain. It is, therefore, felt that government must actively encourage business or economic activity in the country. The encouragement may take a variety of forms. A suitable fiscal policy can go a long way in bringing about industrial prosperity in the country. The domestic industries may be protected against foreign competition by the levy of import duties, or foreign imports may be regulated by means of a quota system which may limit the scope of foreign competition. Government may directly encourage an industry by granting bounties or subsidies. Bilateral or multilateral trade agreements may be negotiated for the benefit of the country's commerce.

There are several other aids to industry which governments supply, *e.g.*, provision of industrial education and research, industrial intelligence and statistics, financial aid either by loan or subscription to share capital or the purchase of debentures or guaranteeing a minimum return on capital. Government can assure its own custom and undertake to make all store purchases from home manufacturers. Government can help the industrialists in making available to them suitable factory sites at concessional rates. These are some of the ways in which government can encourage trade and industry. It is needless to say that a policy of active State encouragement and sympathy can bring about an industrial revolution within a generation.

(*iii*) *Regulating Business.* State intervention is also essential to regulate business activity in the country and to curb the undesirable and anti-social propensities of entrepreneurs. Unregulated and unrestricted competition resulted in the past in serious social evils which were enough to shock the social conscience. The greed and selfishness of the factory owners in the early stages of the Industrial Revolution led to the most callous treatment of the workers. Statesmen were awakened to the dire necessity of State regulation of economic activities of private individuals. Factory Acts were passed. There are provisions in the law for the safety of workers in railways and ships. Compensation is granted for accidents, and schemes of social insurance are in force in all leading countries. Minimum wages are fixed. The interests of the consumers are protected by the strict regulation of public utility services.

(*iv*) *Control.* In some spheres, States do not content themselves merely with facilitating, encouraging, and regulating business. They go further and institute a strict control over the economic life of the citizens. In the Fascist States of Germany and Italy, State controls reached their farthest limit in peace time. There was strict regimentation of both production and consumption. All people have now become fairly familiar with the system of economic controls. Although the war has ended, the controls continue. There is exchange control, import control, control on prices and control on capital issues, etc. Such controls become essential when the nation is passing through a crisis or when it is working for a planned economic development.

(*v*) *State Ownership.* The most drastic form that State intervention takes is the abolition of private ownership of industry. The Bank of England has been nationalised. In India the Reserve Bank of India and Imperial Bank of India have been nationalised. In some cases, it is considered that the interest of the nation at large will be served best if private enterprise is eliminated. The society wants to appropriate the profits in certain lines of economic activity so that these profits, instead of going to enrich private individuals, may be spent for the benefit of the society in general. There is a strong trend nowadays towards collectivism or nationalisation. The superstructure of unfettered capitalism may be seen crumbling even in the citadel of private enterprise itself.

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CHAPTER XLIV

PUBLIC FINANCE

1. Public Finance and its Importance. 'Money makes the mare go' is a very common saying. Everybody realises the necessity of money in all he does. If the importance of money is great to an individual it is greater still to a government. In the previous chapter, we saw the many functions which we expect a modern government to perform. It is obvious that, for the performance of these functions, money is needed. The strength of a nation is reflected in its budget. The extent of State activity and its efficiency are primarily dependent upon the length of its purse.

We often complain that educationally India is very backward, that the system of medical relief is utterly inadequate and that agriculture and industry in India are run on the most primitive lines. Why is it so ? There is only one answer : lack of funds. The amounts spent on beneficent services in India are ludicrously small. With the meagre resources placed at the disposal of the nation building departments, no spectacular progress can be expected. " The revenue of the State," it has been said, " is the State." Everything depends upon it. Kautilya, the earliest of Indian economists, writing more than 2,000 years ago, said : " The beginning of every undertaking is finance."[1]

The system of public finance in a country affects the entire economic field. Public finance is no longer considered as a mere means of raising the State revenues. To use Colbert's words, it is no longer considered simply " the art of so plucking the goose as to cause the least amount of squealing." On the other hand, public finance is now regarded as a powerful instrument of social justice. It is employed by modern governments to bridge, as far as possible, the gulf between the rich and the poor. An equitable system of public finance would tax the rich and spend the proceeds in the supply of such services as are calculated to benefit the poor primarily. The power to tax is really the power to regulate economic activity ; it can retard it or stimulate it. The effect of taxation is felt not merely when revenues are raised but also when they are spent. " And the burdens or benefits resulting from a particular tax policy are not simply monetary, they are also psychological, affecting emotions, the reasoning and the economic behaviour of the tax-payers and the community."[2]

In modern times, thus taxation has a dual purpose : (*a*) to raise funds for the State and (*b*) to achieve its social and economic objectives. Such influences of public finance have today assumed a very great importance.

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[1] Shirras Findlay—*Science of Public Finance*, 1939, Vol. 1, p. 2.

[2] Alfred G. Buehler—Article on "Taxation and the Economy" in *National Tax Journal*, July 1950.

According to Dalton, the most fundamental principle of public finance is what he calls the principle of Maximum Social Advantage.[1] Public finance operations effect a series of transfers of purchasing power. The tax transfers the purchasing power to the government which is then transferred to the individuals to whom the government makes the payment, such as government contractors and government servants. The one aim underlying all these transfers is the attainment of maximum social advantage. The tests of Social Advantage, according to Dalton, lie in the preservation of the community and the improvement of both consumption and production.

To an economist, who is primarily concerned with the promotion of human welfare, the importance of the study of public finance is indeed very great.

But what do we exactly mean by the science of Public Finance and what is its scope or subject-matter ? In Public Finance, we study how governments raise their revenues and how they spend them. In the words of Armitage Smith, " The investigation into the nature and principles of State expenditure and State revenue is called Public Finance."[2]

But the science of Public Finance as it is understood to mean these days, is not merely concerned with public expenditure and public revenues as such. Its scope is much wider. It includes the study also of the system of financial administration.

In the words of Bastable, "Public Finance deals with expenditure and income of public authorities of the State, and their mutual relation as also with the financial administration and control."

Broadly speaking, therefore, the study of the science of Public Finance may be split up into the following main divisions :—

(*a*) The classification of, and the principles underlying, public expenditure ;

(*b*) the methods of raising public revenues and the principles of taxation ;

(*c*) financial administration, including the preparation and sanctioning of the budget, auditing, etc. ; and

(*d*) Public Debt—a study of the principles and methods of public borrowing.

2. Distinction between Public Finance and Private Finance.[3] Before we launch on the study of Public Finance, it may not be without interest to note some differences between government finance and individual finance. It will help us to understand the difference in the method of approach as well as the aim of a government and an individual.

(*i*) *Adjustment of income and expenditure.* To an individual we preach: "Cut your coat according to your cloth." But a government first settles the dimensions of the coat and then proceeds to arrange for the cloth required. In other words, the individual must live within his income, *i.e.*, he must adjust his expenditure to his income. On the other hand, a government first prepares an estimate of expenditure and then devises ways and means to raise that sum. The government, unlike the individual, adjusts its income to expenditure.

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[1] *Principles of Public Finance*, 1948, pp. 10-1.

[2] *Principles and Methods of Taxation*. 1935, p. 14.

[3] For a fuller discussion *see* Findlay Shirras — *Principles of Public Finance*, 1936, Vol. I, Ch. IV.

This, however, is not always true. The individual, too, sometimes first takes a note of his obligations and commitments and then tries to work up his income to the requisite figure. The governments also, sometimes, act like the individuals in adjusting their expenditure to income. When the government realises a surplus, it may decide to increase expenditure in certain desirable directions. And when the public revenues shrink, the government tries to bring about a corresponding reduction in its expenditure through a policy of retrenchment. But, on the whole, we can say that there is a real difference in approach towards the finance of an individual and that of a government. The individual ordinarily knows his income and he must arrange his scheme of expenditure accordingly. A government, on the other hand, first calls for an estimate of expenditure from the various departments, settles the total expenditure, and then levies the taxes accordingly.

(*ii*) *Period of time.* For the public authorities, the unit of time for the budget is one year. But the individual attaches no special sanctity to the period in which the earth revolves round the sun. He need not balance his budget by a particular date or during a given period.

(*iii*) *No internal borrowing for an individual.* In their resources, too, a government and an individual differ. When hard pressed, a government can borrow both at home and abroad. *i.e.*, it can raise either an internal loan or an external loan or both. But the only way open to an individual is external loan. There can be no internal loan for an individual.

(*iv*) *Inflation, a peculiar privilege of a government.* There is another source of income open to a government. It can have resort to the printing press. All belligerent governments, more or less, printed currency notes to meet the huge war expenditure. During the war of 1914-18, Germany almost ruined herself by the reckless issue of currency. When a government feels that the taxable capacity of the nation is over-strained and public confidence has been shaken, it can use this 'hidden hand', wave the magic wand and create money. Can the individual do it ? Not, unless he is prepared to go behind the bars.

(*v*) *Equalising Marginal Utilities.* We have seen that according to the law of equi-marginal utility, every individual tends to so arranage his expenditure that he gets the same marginal utility from every unit of money that he spends. For this purpose, he can weigh the utilities of buying different commodities. But when a government, an impersonal entity, spends money such conscious weighing is not possible, for utility is subjective. This does not, however, mean that public expenditure is indiscriminate.

(*vi*) *Deliberate and big changes in Public Finance are easier.* For an individual big and deliberate changes either in income or in expenditure are not so easy. Everybody likes to supplement or double his income. But how many can do it ? In the same manner, a man gets used to a certain standard of living which does not admit of easy alterations and adjustments. But governments are in a much better position to make big and fundamental changes in the scheme of public income and public expenditure. If a socialist party comes into power, it will surely make revolutionary changes both in the State income and State expenditure. The individual finance lacks this elasticity.

(*vii*) *Provision for the Future.* In the matter of providing for the future, a government is much more liberal and far-sighted. The statesman is a trustee for the future generations. Governments spend large amounts of money on schemes of afforestation, public works or social security schemes from which either there may be no monetary return or the return may be delayed for generations. The individual, on the other hand, is anxious to reap quick returns. Human life is so uncertain that some individuals discount the future at a very heavy rate. But the community outlasts the individual. It exists in perpetuity. Hence the States are bound to make a suitable provision for the future.

(*vii*) *Surplus budgeting is a virtue for an individual but not for the State.* A prudent individual must spend less than he earns. He must have a surplus budget. For an individual this is considered a virtue. But for a State it is not so. Deficit budgets are no doubt bad and indicate unstable finance. But surplus budgeting, however, is not necessarily a virtue. It may mean that the level of taxation is kept unnecessarily high and public expenditure is kept unduly low. Certain departments, *e.g.*, the beneficent and nation-building departments, may be starved. To make surplus budgeting a normal feature is not good finance. We should not make a fetish of a surplus. If big surpluses recur from year to year, it is better either to give relief to the tax-payer or to increase the scale of social expenditure.

(*ix*) *Individual finance is shrouded in mystery.* Secrecy surrounds individual finance. Every man of money must avoid the unwelcome gaze of others. Individual credit depends not on what a man has but on what he is supposed to have. He must keep the people guessing and try to give them some vague and exaggerated idea about his financial position. But publicity, on the other hand, is the essence of public finance. Budgets are published and the widest publicity is given to them. Publicity strengthens, rather than weakens, public credit.

These are some of the features which distinguish public finance from private finance.

3. Public Expenditure. Of the two important aspects of Public Finance, *viz.*, Public Revenue and Public Expenditure, let us study first Public Expenditure. This department of public finance received scant attention at the hands of writers on public finance throughout the 19th century. Attention was almost exclusively focussed on public revenues. It is only in the present century that it came to be realized that public expenditure is far more important in its implications and bearing on public welfare. The main reason for the early neglect of the subject of public expenditure seems to be that the amount of public expenditure was very small, as the field of governmental activity was restricted. Now public expenditure has reached astronomical figures.

There are various factors which have brought about this astounding increase :

(*i*) *Increase in Area and Population.* In the first place, the increase in public expenditure is due to the fact that the physical boundaries of the States have been widened. 'No-man's lands' have been brought under organised government. Also, in certain cases, even if area has not increased, the population figures have considerably gone up. Governments have, therefore, to cater to the needs of millions of more people scattered perhaps over a much wider area.

(*ii*) *The Higher Price-Level.* Another reason which accounts for the mounting public expenditure is the higher price-level. Persons who have seen 'good old days' in India, or have heard about them tell us that there was a time when ghee was selling at 4 annas a seer, whereas now it does not sell even at four rupees per seer. There has been a similar rise in prices of other commodities. Governments, like individuals, therefore, have to find larger amounts of money to pay for the commodities and the services they have to purchase.

(*iii*) *Increase in National Wealth and the Higher Standard of Living.* There has been almost a continuous improvement in agriculture, trade and industry in every country, though in some countries like India it has been painfully slow. There has been a steady increase in the *per capita* income and consequently an improvement in the standard of living. There has also been a corresponding improvement in public revenues and public expenditure.

(*iv*) *War and Prevention of War.* We know it to our cost now how costly a modern war is. England was spending £15 millions daily during the last war. Even when the war is not on, large amounts are spent on preparing for it or on adopting means for its prevention. War has been one of the main factors responsible for increasing public expenditure.

(*v*) *Defective Financial and Civil Administration.* Not a small increase in public expenditure is due to defective financial and civil administration. Duplication and unnecessary multiplication of governmental agencies is not uncommon. Wrong allocation of resources and functions also leads to extravagance. A lax control over public expenditure swells it to an unnecessarily high figure.

(*vi*) *Incidence of Democracy.* In a democratic State, there are several political parties and each party is anxious to enlist the support of the people. The supporters constantly clamour for concessions and benefits at the expense of public funds. From every corner of the country and from every section comes the call for more and more amenities, more education, more medical aid, more roads, and so on. Ministers are asked by the people to open colleges in their home districts. Governments have thus been pressed by the democratic forces to take upon themselves more and more functions. According to Wagner's Law of Increasing State Activity, government's functions have increased both intensively and extensively. The old functions are being performed more thoroughly and many new functions are being undertaken.

Alfred Buehler says in his *Public Finance* : "To some persons a relative increase in public expenditure seems a calamity, to others it is a cause of rejoicing and to still others it is a matter of indifference. No definite percentage of national income can be named as the proper limit for the cost of government, since such a limit must depend upon relative circumstances. The proper size of the expenditure depends on the desires and needs of a community, the effects of government spending and the revenues supporting the spending, the willingness of the population to be taxed, existing burdens of taxation, the resources and population of a community, the distribution of wealth and incomes, the stage of economic development and other variables. The real issue is the advisability of a particular expenditure of a particular government at a particular time."

4. Principles of Public Expenditure. Just as there are well-known canons of taxation, similarly it is possible to formulate some canons or principles to which prudent public expenditure should conform. These principles are :—

(*i*) *The Maximum Social Benefit.* It is necessary that all public expenditure should satisfy one fundamental test, *viz.*, that of Maximum Social Advantage. Every rupee spent by a government must have as its aim the promotion of the maximum advantage of the society as a whole. Care has to be taken that public funds are not utilised for the benefit of a particular group or section of society. The aim is the *general* welfare. Government exists for the benefit of the governed and the justification of the government expenditure is, therefore, to be sought in the benefit of the community *as a whole.*

(*ii*) *Economy.* Although the aim of public expenditure is to maximize the social benefit, yet it does not exonerate government from exercising utmost economy in its expenditure. Economy does not mean niggardliness. It only means that extravagance and waste of all type should be avoided. Public expenditure has great potentiality for public good but it may also prove injurious and wasteful. In the words of Coleridge, "The sun may draw up the moisture from the river, the morass, and the ocean to be given back in general showers to the garden, the pasture and the cornfield ; but it may likewise force away the moisture from the fields of tillage, to drop it on the stagnant pool, the saturated swamp, or the unprofitable sand waste."[1] Thus if revenue collected from the tax-payer is heedlessly spent, it would be obviously uneconomical.

To satisfy the canon of economy, it will be necessary to avoid all duplication of expenditure and overlapping of authorities. Further, public expenditure should not adversely affect saving. In case government activity damaged the individual's will or power to save, it would be repugnant to the canon of economy.

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[1] Macgregor—*Public Aspects of Finance*, 1939, p. 67.

(*ii*) *The Canon of Sanction.* Another important principle of public expenditure is that before it is actually incurred, it should be sanctioned by a competent authority. Unauthorised spending is bound to lead to extravagance and over-spending. It also means that the amount must be spent on the purpose for which it was sanctioned. Allied to the canon of sanction, there is another, *viz.*, auditing. Not only is previous sanction of public expenditure essential but a *post-mortem* examination is equally imperative. All the public accounts at the end of the year should be properly audited to see that the amounts have not been mis-spent or misappropriated.

(*iv*) *The Canon of Surplus.* It remains a sound system of public finance, as of private finance, that an attempt must be made to balance the budget and to make both ends meet. It is not necessary to realise big surpluses from year to year. That will not be good budgeting either. But what is wanted is to avoid ever-recurring deficits. If a country is to maintain its financial credit and stability unimpaired, it must keep its budgets properly balanced.

(*v*) *The Canon of Elasticity.* Another sane principle of public expenditure is that it should be fairly elastic. It should be possible for public authorities to vary the expenditure according to need or circumstance. A rigid level of expenditure may prove a source of trouble and embarrassment in bad times. Alteration in the upward direction is not difficult. It is easy, rather tempting, to increase the scale of expenditure. But elasticity is needed most in the downward direction. When the economy axe is applied, it is a very painful process. Retrenchment of widespread character creates serious social discontent. It is very necessary, therefore, that when the scale of public expenditure has to be increased, it should be increased gradually. A short spell of prosperity should not lead to long-term commitments. A fair degree of elasticity is essential if financial breakdown is to be avoided at a time of shrinking revenue.

(*vi*) *No Adverse Influence on Production or Distribution.* It is also necessary to see that public expenditure should exercise a healthy influence both on production and distribution of wealth in the community. It should stimulate productive activity so that the volume of production in the country increases, and it may be possible to raise the standard of living. But this object of raising of living standards of the masses will be served only if wealth is evenly distributed. If newly created wealth goes to enrich the already rich, the purpose is not served. Public expenditure should aim at toning down the inequalities of wealth distribution.

5. Classification of Public Expenditure[1]. There are several bases on which public expenditure can be classified. We give below some well-known classifications.

We can have one classification on the basis of territorial operations of public authorities. On this basis, public expenditure can be classified as :—

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[1] For a fuller discussion *see* Findlay Shirras—*Principles of Public Finance*, 1936, Vol. I, Ch. V.

(*i*) *Central or National Expenditure* concerning the Central Government, *e.g.*, the expenditure of the Government of India.

(*ii*) *Local Expenditure.* The expenditure of local bodies like Corporations, Municipalities and District Boards.

(*iii*) *Semi-national Expenditure.* Under this head will fall the expenditure of the State Governments in India or in the U.S.A.

Adams gives a functional classification of public expenditure thus :—

(*i*) *Protective Expenditure*, *e.g.*, on army, police, etc.

(*ii*) *Commercial Expenditure* incurred in facilitating, encouraging, regulating and controlling business or in direct commercial enterprises by the State.

(*iii*) *Development Expenditure*, *e.g.*, on education, housing, public health, public works, collection of statistics, etc.

6. Effects of Public Expenditure on Production. There is a type of public expenditure which is regarded as unproductive. This refers to expenditure on the prosecution of, or the preparation for, war. This belief, however, is not entirely correct. Military expenditure, if not overdone, does indirectly assist production by ensuring to the community an ordered economic life. Actually it is overdone and a great deal of military expenditure may be regarded as unproductive. Also, we have to admit that a short and successful war may bring to the nation much economic gain by securing some economic privileges. In the same manner, by preventing an invasion of the country, the armed forces may enable the community to avoid an economic loss. Thus the military expenditure may be considered indirectly or broadly productive.

Most of the public expenditure is productive directly or indirectly. Governments, in every country, are running commercial enterprises which are directly productive. The Indian Government has created solid and lucrative assets in the form of canals and railways. The State industries make a direct contribution to production in the community. In the same manner, schemes of reclamation and afforestation are also directly productive.

A great deal of public expenditure is, however, only indirectly productive. In this connection we may consider the effects of public expenditure on

(*a*) power to work and save ;

(*b*) will to work and save ; and

(*c*) diversion of resources as between employments and localities.

As for *power to work and save,* it may be pointed out that much of the socially desirable public expenditure incurred by modern governments undoubtedly increases the community's productive power and, consequently, also the power to save. Such expenditure includes the provision of means of communication and transport, education, public health, scientific research and industrial research, controlling of human, animal and plant diseases, and expenditure on social insurance, like health insurance, unemployment insurance and old-age pensions.

As for the *will to work and save*, much depends on the character of public expenditure and the policy governing it. By giving the people expectation of future benefits from public expenditure, it may blunt the edge of the desire to work and save. The granting of old-age pensions, insurance against sickness and unemployment and provision of education at State expense may make the people indifferent towards the future and make them neglect saving. This is bound to affect adversely exertions in the present. People will work less. But if such expenditure is kept within proper limits and if it helps the really helpless, the check to work and saving may be negligible.

Regarding the *diversion of resources as between employment and localities*, the public expenditure may have distinctly a beneficial effect on production. Through the system of bounties and subsidies a government may succeed in diverting resources to hitherto neglected channels and thus create new industries. In the same manner, by spending money on the development of backward areas government may add to the total production in the country. A wisely conducted policy of public borrowing stimulates saving and the habit of investment in the community which are certainly beneficial to production. It also diverts resources into channels which may add considerably to the wealth of the community.

We may thus safely conclude that wise public expenditure exerts a very wholesome influence on production. It assists production indirectly by adding to the power to work and save, and by a profitable diversion of resources. This is besides taking up directly the work of production through State enterprises.

7. Effects of Public Expenditure on Distribution. Public expenditure can have a very wholesome influence on the distribution of wealth in the community. It can remove inequalities of incomes. It is an admitted fact that the benefit to the poor from State activities is greater than to the rich. A rich man can protect himself. He can make arrangements for the education and medical relief of himself and his family. But a poor man is helpless. It is, therefore, the poor man who benefits the most from the State activity. To this extent, the State expenditure seeks to bridge the gulf between the rich and the poor.

There is a certain expenditure which benefits the poor exclusively and primarily, *e.g.*, poor relief, old-age pensions and unemployment and sickness benefits. The benefits derived from such social services by the poor may be regarded as a net addition to their income. And when we remember that the revenue is obtained by taxing the rich, the conclusion is inescapable that inequalities of wealth distribution have been reduced to some extent.

But much depends, here again, on the character of public expenditure and the policy underlying it. Just as there are proportional, progressive and regressive taxes, in the same manner the government grants may also be proportional, progressive, and regressive. If public expenditure is really to make the distribution of wealth more even and fair, it must be progressive. It must be according to 'ability to receive' (corresponding to 'ability to pay' in taxation.) Corresponding to the principle of minimum sacrifice in taxation, there is the principle of maximum benefit in public expenditure. Public expenditure must be so arranged as to confer a maximum benefit on the community as a whole. This is the guiding principle. Judged in this light, we can see that expenditure on debt services is regressive because it gives more income to the already rich. Granting of old-age pensions and benefits of social insurance are progressive. If a government subsidizes the production of commodities largely consumed by the poor, it is progressive, otherwise regressive.

We have also to consider the reaction of public expenditure on individual income. If a government grant reduces the desire to work and save, it may lead to reduction of incomes of the beneficiaries. In this case, the inequalities of wealth distribution are not reduced.

On the whole, public expenditure in modern times tends to make the distribution of wealth in the community more equitable.

CHAPTER XLV

PUBLIC FINANCE—(*Contd.*)

PUBLIC REVENUE

1. Classification of Public Revenue. In the last chapter, we discussed public expenditure and now we turn to public revenues. First, its classification. Public revenues have been variously classified. Adam Smith divided public revenue into two parts : (*i*) that derived from the property of the sovereign, and (*ii*) from incomes or properties of the people. This classification is obviously out of date, for a complete separation has now been effected between the sovereign and the State. The sovereign has to be content with a moderate Civil List. A modern State derives the bulk of its revenue from taxation.

Adams classifies public revenues as follows :

(*i*) *Direct revenue.* Government's own income, *i.e.*, from public domains, public industries, gratuities, gifts, confiscations and indemnities.

(*ii*) *Derivative Revenue.* This is income derived from the people's incomes. This revenue is collected by way of taxes, fees, assessments, fines, penalties, etc.

(*iii*) *Anticipatory Revenue.* This consists in taking into account the future income, *e.g.*, loans and the proceeds of treasury bills.

But it should be remembered that income from loans is not generally considered a part of public revenue. As commonly understood, the public revenue consists of State income from State domain. industries, taxes, etc.

We must remember that attempts at classification have purely academic interests with little or no practical value. In India, the sources of revenue are classified as Central, including income-tax, customs, union excise duties, opium, posts and telegraphs, railways and corporation tax ; State sources include land revenue, forests, registration, stamps, excise, entertainment tax, sales tax and a share in union excises and income-tax ; and Local sources include octroi duties, taxes on vehicles, trades, professions, water-rate, house-tax, etc., for municipalities and provincial rates and grants for district boards.

2. Tax, Fee, Rates, etc. We have seen that the most important source of public revenue is taxation. But taxation revenue takes several forms. It consists of taxes, fees, prices, special assessments, rates, etc. Let us distinguish between all these.

Tax. Plehn defines taxes thus : "Taxes are general compulsory contributions of wealth levied upon persons, natural or corporate, to defray the expenses incurred in conferring *common benefit* upon the residents of the State."[1] This definition brings out the true nature of a tax. The essence of a tax is (*a*) that it is a compulsory levy under certain conditions, and (*b*) it is meant for the *general* purposes of the State. The individual cannot expect that the State should render him a specific service in return for the tax paid by him. If I pay income-tax, I cannot claim in return that the State should post a policeman at my gate during night to protect my property which is a source of income to me. This, however, does not mean that State undertakes to do nothing in return for the taxes that it receives from the people. The State carries on the general administration and confers a lot of benefit on the community. But these are *common* benefits meant for all and not any *special benefit* meant for a particular tax-payer. There is no direct *quid pro quo.* The taxes are intended to meet the *general* expenses of the Government which confer a common benefit. In the words of Taussig, "The essence of a tax, as distinguished *from other charges by Government*, is the absence of any direct *quid pro quo* between the tax-payer and the public authority."[1]

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[1] *Introduction to Public Finance*, 1921, p. 59.

Fee. It is also a compulsory payment made by those who obtain a definite service in return. The fee is intended to cover a part of the cost of the service rendered. It is never more than the cost of service. Also, some public purpose is kept in view in the service rendered. The obvious example is of the educational fees. In the words of Plehn, "A fee may be defined as a compulsory contribution of wealth made by a person, natural or corporate, under the authority of public power to defray a part or all of the expenses involved in some action of the Government which, while creating a common benefit, also confers a special benefit, or one that is arbitrarily so regarded." In short, a fee is charged for a specific service which is rendered primarily in public interest. A *licence fee*, however, is much more than the cost of service, and there is not much of a positive service in return.

Price. Prices are also paid for specific services rendered by the State. But the difference between a fee and a price is this that in a fee a public interest is prominent, whereas a price is a payment for a service of business character, *e.g.*, charges for travelling on State railways. You can escape the price by not purchasing a service. Price also differs from a tax. A tax is paid for a common benefit, whereas both fees and prices are paid for specific benefits. When public authority sells a commodity or renders a service, the charge made on the consumer, who avails of the service or buys a commodity, is called a price.

Special Assessment is defined by Prof. Seligman as "a compulsory contribution levied in proportion to the special benefit derived to defray the cost of a specific improvement to property undertaken in the public interest." Suppose government builds a road or makes suitable drainage arrangements, all the property in the neighbourhood will appreciate in value. The State has a right to appropriate a part of this unearned increment. The tax imposed for the purpose is called a special assessment. These assessments are intended to cover a part of the extraordinary expenditure incurred by the public authority in this connection. They are levied on property proportionately to the benefit conferred. Seligman analyses the essence of a special assessment thus: (*a*) There is the element of special *purpose*; (*b*) the special benefit is measurable; (*c*) these assessments are not progressive but proportional to the benefit received; (*d*) they are for specific local improvements; and (*e*) they are intended to extend and improve, as it were, the permanent plant of the community. Unlike a fee there is an element of coercion in special assessment.

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[1] *Principles of Economics*, Ch. LXVI, I.

Rates. Rates are levied by local bodies, *i.e.*, municipalities and district boards, for local purposes. They are generally levied on immovable property of the residents but not necessarily for any special improvements effected or special benefits conferred. The rates generally vary from locality to locality.

3. Classification of Taxes. Taxes have been variously classified. Some classifications are given below :—

I. Taxes may be proportional, progressive, regressive and degressive.

Proportional Tax. A proportional tax is one in which, whatever the size of income, same rate or same percentage is charged. If all the tax-payers have to pay, say one per cent of their income as tax, it is case of proportional taxation. The same percentage is charged from all tax payers.

Progressive Tax. If, on the other hand, the rate of the tax rises as the taxable income increases, the tax is called a progressive tax. The principle of a progressive tax is : " higher the income, higher the rate."

It is worth noting that even under a proportional tax the rich man pays more. For example, if the rate is 1 p.c. on the monthly salary, a man, who is getting Rs. 200 p.m., will pay Rs. 24 per year and the man, who is getting Rs. 500 p.m., will pay Rs. 60 per year. Thus the man with the higher income pays more even under the proportional taxation. But, under progressive taxation, he will pay *much more* because as income increases, the rate of the tax must also increase. The man with Rs. 500 monthly salary may have to pay 2 p.c. instead of 1 p.c. He will pay, therefore, Rs. 120 instead of Rs. 60 per year. Every country has adopted the progressive system of taxation, as it is considered more equitable. This is due to the fact that the sacrifice entailed in proportional taxation is less than it ought to be. We shall consider the *pros* and *cons* of progresive taxation in a subsequent section.

Regressive Tax. A tax is said to be regressive when its burden falls more heavily on the poor than the rich. It is the opposite of a progressive tax. No civilised government imposes a tax in which, as income increases, the rate of tax is lowered. That would be palpably unjust. But there are several taxes on commodities whose burden rests mainly on the poor. The Indian salt tax was regarded as a regressive tax, as it pressed more heavily on the poor than the rich. As a matter of fact, the rich man did not feel it at all.

Degressive Tax. The tax is called degressive when the higher incomes do not make a *due* sacrifice, or when the burden imposed on them is relatively less. This will happen when a tax is only mildly progressive, *i.e.*, when the rate of progression is not sufficiently steep. A tax may be progressive up to a limit beyond which the same rate is charged. In that case, there may be lower relative sacrifice on the larger incomes than on the small incomes.

II. Another classification of taxes is as *Direct Taxes* or *Indirect Taxes*. In the case of a direct tax, the man who pays it is also intended to bear it. But an indirect tax is expected to be shifted to other persons. If I pay income-tax I have to bear it. I cannot pass it on to somebody else. It is a *Direct Tax.* But if a tax is imposed on sugar, the dealer who first pays it, charges it from the next purchaser till ultimately it is borne by the consumers of sugar. The tax has been shifted. It is called an *Indirect Tax.* In the case of direct taxes, as Mrs. Hicks explains, the liability varies with the circumstances of the tax-payer and the relation between the tax-payer and the revenue authorities is direct and personal. But, in the case of indirect taxes, the liability depends on the amount or value of a particular product or service purchased. Here there is an indirect relation between the tax-payer and the revenue authorities, for the taxes are collected unofficially through the agency of merchants. Direct taxes are taxes on income and indirect taxes are taxes on outlay.

We shall discuss the merits and demerits of direct and indirect taxes in the next chapter.

III. Taxes may also be classified as *Specific* and *ad valorem taxes*. Specific tax is according to the weight of the commodity. *Ad valorem* is according to its value. If imposed on coarser or cheaper articles, the specific duties mean a heavier burden and are considered regressive in character. But they are simpler to administer. For the administration of *ad valorem* duties an elaborate administrative machinery is needed. The invoice has to be checked and a host of appraisers are needed for evaluating the goods.

4. Canons of Taxation. Adam Smith's contribution to this part of economic theory is still regarded as classic. His statement of the canons of taxation has hardly been surpassed in clarity and simplicity. Adam Smith's canons still constitute the foundation of all discussions on the principles of taxation. We give below his four celebrated canons.

(*i*) *The Canon of Equality.* " The subjects of every State ought to contribute towards the support of the government, as nearly as possible, in proportion to their respective abilities, that is, in proportion to the revenue which they respectively enjoy under the protection of the State."

This canon embodies the principle of equity or justice. This is the most important canon of taxation. It lays the moral foundation of the tax system. The canon of equality does not mean that every tax-payer should pay the same sum. That would be manifestly unjust. Nor does it mean that they should pay at the same rate which means proportional taxation, and a proportional tax is also not a just tax. What this canon really means is the *equality of sacrifice*. The amount of the tax paid is to be in proportion to the respective abilities of the tax-payers. This clearly points to progressive taxation. Adam Smith makes this clear in a subsequent portion of his book *Wealth of Nations*. He says: "It is not very unreasonable that the rich should contribute to the public expense not only in proportion to their revenue but something more than that proportion."[1] Only then the tax will be in proportion to the ability to pay.

(*ii*) *The Canon of Certainty*. "The tax which each individual is bound to pay ought to be certain, and not arbitrary. The time of payment, the manner of payment, the quantity to be paid ought all to be clear and plain to the contributor and to every other person. Where it is otherwise, every person subject to the tax is put more or less in the power of the tax-gatherer, who can either aggravate the tax upon any obnoxious contributor, or extort, by the terror of such aggravation, some present or perquisite to himself."

Uncertainty in taxation, according to Adam Smith, encourages insolence or corruption. He regards this canon as very important, for in his view "very considerable degree of inequality....is not near so great an evil as a very small degree of uncertainty." Hadley also regards it as the most fundamental canon, for, according to him, all attempts at equality will prove illusory without the taxes being certain. The canon of certainty demands that there should be no element of arbitrariness in a tax. It is not to be left to the caprice or the sweet will of the income-tax department. The tax-payer should be able to see for himself why he is called upon to pay a particular sum. That is why wide publicity is given to the budget proposals and discussions thereon. The passing of the budget is a guarantee of certainty.

'*An old tax is no tax*' is a maxim of taxation which issues out of the canon of certainty. An old tax is well known, its reactions are certain and the people are supposed to have made the necessary adjustments. The tax is not felt. It causes the least disturbance in the economic arrangements of the tax-payer. There is little inconvenience from an old tax.

Certainty is needed not only from the point of view of the tax-payer but also from that of the State. The government should be able to estimate roughly the proceeds of the various taxes proposed to be levied and the time when they are expected to flow in. Only then the government can follow its financial programme.

(*iii*) *The Canon of Convenience*. "Every tax ought to be levied at the time or in the manner in which it is most likely to be convenient for the contributor to pay it."

The canon of certainty says that the time and the manner of payment should be certain. But the canon of convenience says that the time of payment and the manner of payment should be convenient. If a tax on land or house is collected at a time when rent is expected to be paid and acceptable by cheque, the manner is convenient but not so if it is to be paid personally to the taxing authority. In the latter case, there will be lot of inconvenience and harassment. Taxes on consumers are very convenient. The consumer pays them when he makes purchases and at a time when he can afford to pay because the purchaser chooses his own time for purchasing. The manner is also very convenient for he has to make no special arrangement for paying a tax. He pays it when he buys the commodity. The tax is wrapped up in the price of the commodity.

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[1] *The Wealth of Nations*, Book V, Vol. II, p. 327.

The Indian land revenue conforms to the canon of convenience, because it is paid in instalments and after the harvest time. Income-tax, on the other hand, infringes the canon of convenience. The assessee has to take his account books to the income-tax officer in order to satisfy him about the accounts. This necessitates a series of personal interviews with consequent loss of time. It also involves a lot of trouble and oppression.

(*iv*) *The Canon of Economy.* "Every tax ought to be so contrived as both to take out and to keep out of the pockets of the people as little as possible, over and above what it brings into the public treasury of the State."

One implication of the canon of economy is very obvious. The tax is economical if the cost of collecting it is very small. If, on the other hand, the salaries of the officers engaged in collecting the tax take away a big portion of the tax revenue, the tax is certainly uneconomical. As far as possible, as much should come into the State treasury as is taken out of the people's pockets. Nothing should evaporate in the way. If there is corruption or oppression involved in the frequent visits to the income-tax office and the odious examination by the taxing officer, the canon of economy is not satisfied.

But the tax should be economical in another, perhaps broader, sense. It would infringe the canon of economy, if it retarded the development of trade and industry in any manner. If incomes are subjected to a very heavy tax, saving may be discouraged, capital will not accumulate and the productive capacity of the community will be seriously impaired. This would be obviously uneconomical. A tax is economical if it does not hamper in any manner the prosperity of the country. It was in conformity with the canon of economy that the Indian Government budget for 1946-47 granted an allowance for expenditure on scientific research and buildings erected and machinery installed. They are bound to add to the productive capacity of the nation in due course.

Taxes on harmful drugs and intoxicants are regarded as economical, because they not only bring income to the State, but also discourage unproductive expenditure. But taxes on raw materials are uneconomical, because they raise the price of the manufactured article and weaken the competitive power of the industry. Also, every middleman goes on adding something to the tax that he has paid.

The first canon of Adam Smith is ethical and the other three are administrative in character

Other Canons. Since Adam Smith wrote, the science of Public Finance has continued to make progress. Subsequent writers have added canons of their own to his four canons. The following are some of those which have been subsequently added :

(*v*) *Fiscal Adequacy or Productiveness.* The State must live on the revenue raised from the people by means of taxes. The government should be free from financial embarrassments. It will be necessary, therefore, that the tax proceeds should adequately cover the government expenditure and the government does not run into a deficit. But the government should not err on the side of excess. In their zeal to raise more revenue, they should not cripple in any manner the productive capacity of the community or impair the economic resources of the country.

The canon of productivity would indicate that one tax bringing a large income is better than many taxes each bringing a very small revenue. Too great a multiplicity of taxes is to be avoided because each tax is likely to cause some vexation to the citizens. But here again, we must warn that the principle of concentration should not be carried to excess, otherwise it may become either uneconomical or inequitable.

(*vi*) *Elasticity.* The canon of elasticity is closely connected with that of fiscal adequacy. As the needs of the State increase, the revenue should also increase otherwise they will cease to be adequate. To meet an emergency or a period of strain, the government should be in a position to augment its financial resources. Some of the taxes should be capable of yielding more if need be. Income-tax is a very good example of an elastic tax. By raising the rate a bit or by levying a surcharge, the yield can be considerably increased. When the last war broke out, the first financial measure adopted was a surcharge on income-tax. Railway and postal rates also are fairly elastic.

(*vii*) *Flexibility.* The canon of flexibility looks like that of elasticity but the difference between the two is quite clear. Flexibility means that there should be no rigidity in the tax system so that it can be quickly adjusted to new conditions, and elasticity means that the revenues can be increased. Unless the system is flexible, the revenue cannot be increased, for alteration will not be possible. Thus presence of flexibility is a condition of elasticity. If a tax system cannot be altered without bringing about a revolution, it lacks flexibility. The Permanent Settlement of Bengal (1793) is an example of rigidity or lack of flexibility in a tax. Under this arrangement the Government bound itself to collect the same sum from the landowners in perpetuity. The lack of flexibility is, in no small measure, the cause of the financial troubles of Bengal.

(*vii*) *Simplicity.* In the words of Armitage Smith, " A system of taxation should be simple, plain and intelligible to the common understanding.' This canon is essential if corruption or oppression is to be avoided. If a tax is complicated so that the tax-payer cannot understand how much he is to pay and why he is to pay it, a great power will pass into the hands of the tax-gatherers. The door will be widely opened to corruption and oppression.

(*ix*) *Diversity*. Another important principle is that of diversity. A single tax or only a few taxes will not do. There should be a large variety of taxes so that all the citizens, who can afford to contribute to the State revenue, should be made to do so. They should be approached in a variety of ways. There should be a wise admixture of direct and indirect taxes. In this manner, the canons of fiscal adequacy and equity may be better satisfied. But too great a multiplicity will be bad and uneconomical.

(*x*) Considering the role that taxation is called upon to play in modern times, another principle is being emphazised, *viz.*, that the effects of taxation should be compatible with the economic and social objectives that the community has placed before itself and with the institutions and processes, considered essential for the attainment of these objectives. The neutrality principle or 'leave-them-as-you-find-them' principle no longer holds the field today. The taxation policy today has to be more positive. It is intended to bring about economic stability and development, besides the attainment of other political and social goals. In conjunction with economic controls and monetary measures, taxation has to be freely used to combat threats of economic instability and stagnation by means of a "managed compensatory fiscal program." It was Adolph Wagner, a German economist, who in his book *Finanzwissenschaft*, published in 1880, developed a "social compensatory or social political theory of taxation" for the purpose of reducing economic inequalities. The application of this theory can be seen during the depression dilemma of the 'thirties during and after the Second World War when taxation has been used as tool for fighting inflation.

Several other considerations have been put forward. It is recommended, for instance, that a tax should fall on revenue and not on capital. It should not cut down the minimum subsistence of the tax-payer, and so on.

Mrs. Hicks emphasizes three principles of taxation.[1] In the first place, the primary purpose of taxation is to finance public services. Secondly, the citizens should be taxed according to their ability to pay based on their income and family circumstances. This principle is concerned with the question of social justice. In the third place, taxes should be universal *i.e.*, they should not discriminate in any manner between citizens in the same financial position. This principle is concerned with equality before the law.

It must be said that in no country does each tax satisfy each of these canons. We have to look to the tax system *as a whole* rather than to each individual tax. Some taxes are bound to infringe some canons. But the tax system, as a whole, should satisfy most of these principles.

5. Characteristics of a Good Tax System. A good tax system should be composed of taxes which conform to the canons of taxation discussed above. The system *as a whole* should be equitable. Its burden should fall on the broadest shoulders. It should also be economical so that the work of collection is done as cheaply as possible. It should not hamper the development of trade and industry. It should, on the other hand, assist the economic development of the country. The government should be certain of its revenue. The tax system should be based on a comprehensive and up-to-date statistical information so that accurate forecasting is made possible. The tax system should not be a mere leap in the dark. Its effects should be calculable with a reasonable precision. The taxes, as a whole, should be convenient, *i.e.*, felt as little as possible.

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[1] Ursula K. Hicks— *Public Finance*, 1948. pp. 131-33.

The tax system should be simple, financially adequate and elastic so that it can respond to new needs of the State. It should not be rigid like our land revenue which is fixed for 30 or 40 years. The adoption of the sliding scale system of land revenue in the Punjab has removed this defect to some extent.

The ideal of simplicity may lead us to advocate a single tax. But the single tax will expose the tax system to other serious objections. It is, therefore, agreed that tax system should be as much broad-based as possible. There should be diversity in the system. But we do not want too great a multiplicity. We do not agree, therefore, with Arthur Young when he says, " If I were to define a good system of taxation, it should be that of bearing lightly on an infinite number of points, heavily on none."

Further, the tax system should be efficient from the administrative point of view. It should be simple to administer. There should be little scope for evasion or accumulation of arrears. It should be fool-proof and knave-proof. Chances of corruption should be minimised.

Another important characteristic of a good tax system is that it should be a harmonious whole. It should be truly a system and not a mere collection of isolated taxes. Every tax should fit in properly in the system as a whole so that it is a part of a connected system. Each tax should occupy a definite and due place in the financial structure. The taxes should not pull in different directions. For example, imposition of a protective duty and a countervailing excise duty do not go well together.

According to Kaldor, who was invited to report on the Indian tax system, there are three main considerations that should be taken into account in framing an effective tax system, *viz.*, equity, economic effects, administrative efficiency. From the point of view of equity, the most important consideration is that the tax system should not contain a systematic bias in favour of particular groups of tax-payers and against others. From the point of view of economic effect of taxation, the major consideration is to prevent the tax system from becoming too much of a disincentive on effort, initiative or enterprise. From the point of view of administrative efficiency, all loop-holes for evasion should be plugged and the main requirements are : simplicity and comprehensiveness embracing all forms of beneficial receipts, a single comprehensive return, self-checking system of taxation and an automatic reporting system.

On the above consideration, an effective tax system, according to Kaldor, requires taxes on (*a*) income, (*b*) capital gains, (*c*) net wealth, (*d*) personal expenditure, and (*e*) gifts. All these can be assessed as a single operation on the basis of a single comprehensive return furnished by the tax-payer.

6. The Indian Tax System. Administratively, the Indian tax system is fairly efficient. There is a little smuggling and not many leakages. Evasion is not common. The cost of collection is not disproportionately high. It is fairly simple. There is hardly any objection on the ground of fiscal adequacy or sufficiency. The tax system is quite productive. It is also fairly broad-based. Even the poorest in the country pay something, *e.g.*, land revenue. The system is fairly diversified. The Indian tax system is also not particularly inconvenient as compared with the tax system of other countries. The land revenue is paid in instalments and paid after the harvest. That is very convenient. The taxes on commodities occupy an important place. On the ground of flexibility or elasticity also we have no cause for complaint. Our tax system has stood the strain of the costliest war in human history in a magnificent manner.

But we cannot say that ours is an ideal tax system. Duties have been imposed in India without any regard for the needs of Indian trade and industry. The customs duties were levied exclusively for revenue purposes. The tariff schedule not infrequently hampered the development of Indian industries. Meagre depreciation allowances were granted so that the industry felt a real difficulty in the renewal or replacement of plants, though recent budgets have made up for this defect to some extent. Our tax system, therefore, does not fully satisfy the canon of economy.

The biggest breach is in the canon of equity.[1] The Indian tax system discriminates against the poor and in favour of the rich. Income-tax is a tax which is paid by the rich but progression is not as steep as it ought to be. Land revenue, customs, excise and even railway fares are in the aggregate contributed more by the poor than by the rich. Absence of succession or death duty till recently accentuated the regressive character of our tax system. In the words of Prof. K. T. Shah, "Richer classes escape relatively with much lower burden, even though their ability to bear or evade such burden is much greater, while the poorer classes, who cannot escape from such burdens, have to bear the lion's share of the burden with less than the lamb's capacity to shoulder them." The Indian income tax does not make allowance for the number of dependants and is, therefore, not in accordance with ability to pay.

There is an element of uncertainty. Monsoons are a disturbing factor. The Indian budget has been called a gamble in the monsoons.

There are several other defects in the Indian tax system. It is haphazard and has not been scientifically planned. It has been moulded by the exigencies of time, the main concern being to balance the budget. Little attention has been paid to incidence of taxes and their effect on production and distribution. It has not been truly a system. Sir Walter Layton called the Indian budgets 'tight fit' with little provision for unexpected and unforeseen expenditure.

The tax system is also very conservative. Excise revenue and land revenue in the existing form, continue even though they have been universally condemned.

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[1] See *Indian Economics* by Dewett and Singh.

Unlike in other advanced countries, the direct taxes in India play a secondary role, although the system has been improved in this respect on account of the financial measures adopted during the war of 1939-45. In 1938-39 the proportion of taxes on income to total revenue was 22·6 p.c. but it rose to 62·3 p.c. in 1945-46.

Till recently our tax system did not distinguish between earned and unearned incomes and thus treated the actual worker and the idle rich alike. In 1945-46, 10 p.c. earned relief was granted.

Allocation between Central, Provincial and Local Finance is also defective. Income-tax being a direct tax should be wholly Provincial and many Provincial taxes like the entertainment tax and sales tax should go to the local bodies. A part of the land revenue should also go to the local boards.

According to Kaldor, the present system of direct taxation in India is, however, both inefficient and inequitable. It is inequitable because the present base of taxation, *i.e.*, income as defined in law, is defective and is capable of being manipulated by certain classes of tax-payers. It is inefficient because of the possibility of large-scale evasion on account of the limited information furnished by tax payers and on account of the absence of any comprehensive reporting system on property transactions and property income.

Kaldor has made proposals which aim at broadening the tax base through the introduction of an annual tax on wealth, the taxation on capital gains, a general gift tax, and a personal expenditure tax. All these five taxes are to be assessed simultaneously on the basis of a single comprehensive return and they are self-checking in character so that concealment or understatement of income from certain items will involve an added liability with regard to others. The introduction of a personal expenditure tax and an annual tax on wealth would mitigate the severe disincentive effects on work, saving and enterprise of a heavy tax levied on income. At present these disincentive effects are sought to be avoided through the exemption of capital gains from taxation, through over-liberal provisions concerning deductible expenses and through straightforward tax evasion. It is far better to have a fool-proof system of taxation with a moderate rate schedule than a system which has the appearance of high progressivity, but which cannot be effectively or impartially administered.

Kaldor suggests that the maximum rate of tax on income should not exceed 45% (as against the present 92%), the maximum rate of an annual wealth tax 1½% (on the excess of capital value over Rs. 15 lakhs), the maximum rate of the personal expenditure tax 300% (on a net personal expenditure per head of over Rs. 50,000 per annum) and the maximum rate of gift tax 80% (on gifts exceeding Rs. 40 lakhs). All capital gains should be taxed at the same rate as income. To make the income-tax fairer and its incidence less arbitrary some reform has been suggested in deductible expenses. A single uniform tax of 7 annas in the rupee should be levied on the whole income of the Companies.

To control evasion compulsory auditing of accounts has been suggested in cases where incomes exceed Rs. 50,000 in the case of business income and Rs. 1,00,000 in the case of other personal income.

We cannot say, therefore, that the Indian tax system is perfectly satisfactory. There is much room for improvement.

7. Problem of Justice in Taxation. We have discussed the various canons of taxation. The most important of these seems to be the canon of equality or equity. The most fundamental problem in taxation, therefore, is the problem of justice. Everybody expects the Finance Minister to arrange his taxation proposals so as to ensure that the burden of taxation falls on those who can fully bear it. " It is equitable that people in the same economic position should be treated in the same way for purposes of taxation." But how to measure the economic position ?

In order to achieve the ideal of justice in taxation several principles have been suggested. We examine some of these principles below.

(*i*) '*The Cost of Service Principle.*' It is said that it would be just if people are charged the cost of the service rendered to them. However equitable it may appear to be, 'the cost of service principle' cannot be applied in actual practice. The cost of service of the armed forces, police, etc., the services which are rendered out of tax proceeds, cannot be exactly determined. We have to calculate how much it costs to render a service to the particular tax-payer. We know that in case of taxes there is no direct *quid pro-quo* to the tax-payer. Hence the question of the ascertainment of the cost of service to an individual tax-payer does not arise. Only in those cases where the services are rendered out of prices, *e.g.*, supply of electricity, railway or postal service, a near approach can be made to charging according to the cost of service. Even here the exact cost cannot be ascertained and for fixing the charges we have to fall back on the principle of "charging what the service will bear." The cost of service principle, therefore, must be rejected as being impracticabe.

(*ii*) *Benefit or ' Quid Pro Quo ' Theory.* It is suggested that the taxes should be levied according to the benefit conferred on them. But on grounds similar to those mentioned above, the benefit theory also breaks down when an attempt is made to give it a practical shape. Most of the public expenditure is incurred for common or indivisible benefits. It is impossible to calculate how much benefit accrues to a particular individual. There are a few cases only where the benefit to the individual is ascertainable, *e.g.*, old-age pensions. Applied to this case, the theory would demand a refund of the pension itself, for that precisely is the measure of the benefit. None would seriously put forward such a proposal. It is, therefore, impossible to ask the people to contribute according to the benefits received by them. Several other objections can be raised against the Benefit Theory. It is against the basic principle of the tax. A tax is paid for the *general* purposes of the State and not in return for a *specific* service. The Benefit Theory can have meaning only if we think of the benefit to the community as a whole. But this is obviously useless for the purpose of taxing the individual. If you want to make some exceptions, you will be in a difficulty. On what basis will you make the exceptions ?

Moreover, it is commonly believed that the poor benefit more from the State activities than the rich. If that is so, then to apply the Benefit Theory would mean making those people pay who cannot afford to pay and letting off those who can and who should. This would be absurd.

In the words of Plehn, " That common benefits are the peaceful enjoyment of life, liberty and property." So far as life and liberty are concerned, the benefit of State protection is the same for all. This would indicate a uniform tax, say a poll tax. But poll tax has been long discarded on account of its relatively small yield and greater cost and botheration of collection. If we take protection of property as the basis, then it should be proportional tax, proportionate to the capital value or the income-yielding capacity of the property. But proportional taxation has also been rejected in modern times as being less than just. We cannot, therefore, take benefit as a criterion of justice.

The Benefit Theory has, however, a place in all modern tax systems. The idea of benefit stands out prominently in the case of fees, licences, special assessments and local rating.

(*iii*) *'Ability to pay' or Faculty Theory*. The most popular and the plausible theory of justice in taxation is that every tax-payer should be made to contribute according to his ability or faculty to pay. The tax is to be based on his taxable capacity. Nothing would appear to be more just. But the acceptance of the principle does not mean the end of our difficulties : rather the difficulties begin. The question which then faces us is ' What is the measure of a man's ability to pay ? '

In the search for a proper criterion of a person's faculty to contribute to the State expenditure, we can proceed on two lines, subjective and objective. If we examine the position of the tax-payer in its subjective aspect, we shall consider the inconvenience, the pinch or the sacrifice involved. On this point, three distinct views have been advanced : (*a*) the Principle of Equal Sacrifice ; (*b*) the Principle of Proportional Sacrifice ; and (*c*) the Principle of Minimum Sacrifice.

In the words of J.S. Mill, " Equality of taxation, as a maxim of politics, means *equality of sacrifice*. It means apportioning the contribution of each person towards the expenses of government, so that he shall feel neither more nor less inconvenience from his share of the payment than every other person experiences from his."[1] According to this principle, the money burden of taxation is to be so distributed as to impose *equal real* burden on the individual tax-payers. This would mean proportional taxation.

According to the principle of *proportional sacrifice*, the real burden on the individual tax-payer is to be not equal but proportional either to their income or the economic welfare they derive. This would be more just than if the sacrifice involved were equal. Those who can make a greater sacrifice should be asked to do so. This would mean progressive taxation.

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[1] *Principles of Political Economy*, Book V, II 2.

The *minimum sacrifice principle* considers the body of tax-payers in the aggregate and not individually. According to this principle, the total real burden on the community should be as small as possible. In the words of Edgeworth, the chief exponent of the theory of minimum aggregate sacrifice, "The minimum sacrifice is the sovereign principle of taxation. The principle would involve a high level of minimum exemption and a very steep progression as incomes increase. The less the aggregate sacrifice the better the distribution of the tax burden in the community. The State exists to maximize human welfare. This it will be able to do by minimizing the sacrifices involved."

The sacrifice principles have only an academic interest. This hair-splitting has little practical value. Sacrifice is something subjective; it is internal to the tax-payer and we have no means of measuring it. A great sacrifice does not always mean a great injury. A tax on wine means a great inconvenience to the consumer of wine but a small real injury to him. Sacrifice as a test of ability must be abandoned.

We must, therefore, take our second line of approach to measure a man's faculty to pay, that is, proceed objectively. Here we are on surer grounds. But here again, we find that several criteria have been suggested. A man's faculty to pay may be measured according to (*a*) consumption; (*b*) property; or(*c*) income. Consumption is not a sound criterion because consumption or utilisation of the services of the State by the poor is considered to be out of all proportion to their means and as such it cannot be taken as a practical principle of taxation. Property also cannot be a fair basis of taxation, for properties of the same size and description may not yield the same income; and some persons having no property to show may have large incomes, whereas men of property may be getting small incomes. To tax according to property will not be taxation according to ability. Income, however, remains the single best test of a man's ability to pay. But even in the case of income, the tax will be in proportion to faculty if there is a minimum exemption to allow for a reasonable subsistence, if there is an allowance made for the number of dependants, and finally if the principle of progression is applied by taxing the rich at a higher rate.

Besides, we have to consider 'the ability to pay' not merely of the individual tax-payer but of the community as a whole. In this light, it is necessary that the tax system as a whole is not oppressive. It should not discourage saving or retard accumulation of capital. Also, it should not, in any manner, impair the productive capacity of the community by hampering the development of trade and industry in the country.

This is the solution of the problem of justice in taxation. The ends of justice are not served by applying the cost of service principle or by taxing according to benefit, but according to faculty or ability to pay. The ability to pay cannot be judged subjectively by the amount of sacrifice involved, but objectively according to the man's income and not according to his consumption or property. Each proposal to achieve justice leads to some sort of progression in taxation. What is intended is that the tax system *as a whole* should be equitable. Each individual tax may not be absolutely just or equitable. The inequity of one tax may be neutralised by the equity of another. "There may be inequity in the parts but equity in the whole."

Equity is a matter of opinion. Sometimes some people happen to think that a certain tax is equitable. There is no generally accepted definition of equity. It is, in the words of Dalton, "an elusive mistress, whom perhaps it is only worth the while of philosophers to pursue ardently and of politicians to watch warily."

8. Some other Theories of Taxation. We propose here to make only a passing reference to some other theories or principles of taxation put forward by some writers on Public Finance.

'Leave-as-you-found-them' principle. According to this principle, the existing distribution of wealth is not to be disturbed. The inequalities of wealth distribution are to be neither increased nor decreased. The advocates of this principle want to adopt a non-committal attitude on the question of the existing distribution of wealth. This principle states that "taxes should be so imposed that when all have paid them each will be left in the same position relative to his fellows, as he was before the payment." This principle is not accepted in modern times. The State must reduce inequalities of wealth distribution and not leave them as they are.

The Political or Ethical Principle. This refers to equality, equity or justice in taxation, a theory which we have already discussed. If the circumstances and economic condition of the tax-payers had been the same, to achieve justice would have been a simple affair. But, in view of the varying circumstances of the individual tax-payers, the attempt at justice must cause great headache to the minister of finance. Several ways have been suggested which we have already examined.

The Financial Principle. This is summed up in the cynical suggestion of Colbert, "Pluck the goose with as little squealing as possible." The only guide for the tax-gatherer, according to this principle, is the maximum of revenue with the minimum of protest. No consideration of justice is to enter his mind. He is to follow the line of least resistance. The finance ministers do follow this line actually, although they will not admit it. This is shown by the fact that they are more inclined towards indirect taxation than direct taxation. According to this view, productivity and expediency are more important than equity.

Socialistic or Compensatory Theory. According to the advocates of this theory, it is the function of the State to equalise the distribution of wealth in the community. It can be done by progressive taxation. The aim is to bridge the gulf between the rich and the poor. If this aim is to be completely achieved, it would necessitate taxing the rich to such an extent as may discourage saving and derive capital abroad, which would, no doubt, cripple the productive power of the community. The inequalities of wealth distribution can be reduced not merely by taxation but also by wise public expenditure.

'*Every one ought to pay something.*' The idea is to make every citizen feel a sense of responsibility in State matters so that he may take more active and intelligent interest in civic affairs. It will make the citizens conscious of their position and importance in the State. But, for the poor people this civic consciousness will be too dearly bought if they are called upon to pay taxes that cripple them. It will be more equitable if the poor are exempt from the tax burdens altogether.

9. Proportional *vs.* Progressive Taxation. In our discussion of the various theories of a fair distribution of the tax burden, we have almost invariably been led to the conclusion that there must be some degree of progression wherever possible in a tax, because only then can it be called equitable. The principle of progression has been accepted everywhere now. But it was not always so.

There have been many advocates of proportional taxation. Mc Culloch's well-known remark is typical of the attitude of the nineteenth century. He said : " When you abandon the plain principle (of proportion) you are at sea without rudder and compass and there is no amount of injustice you may not commit." J. S. Mill was even more emphatic. He said : " A graduated income-tax was an entirely unjust mode of taxation and, in fact, a graduated robbery." According to him, progressive taxation was a step towards confiscation.

According to the principle of equality of sacrifice, proportional taxation could be justified only on the assumption that the marginal utility of income decreases *slowly* as income increases. But this assumption is not correct. If we keep in view the principle of proportional sacrifice, then the proportional tax can be justified only on the assumption that as income increases, the marginal utility of income does not at all decrease. This assumption is absurd, because, when income increases, its marginal utility must decrease. Hence proportional taxation can be justified neither on the principle of equality of sacrifice nor on the principle of proportional sacrifice. Proportional taxation will entail equal sacrifice, whereas sacrifice itself should be proportional to the taxpayer's capacity. Proportional taxation is, therefore, not equitable. It is also not sufficiently productive and the element of arbitrariness even in proportional taxation is not altogether absent. The theory of proportional taxation has, therefore, been abandoned definitely so far as direct taxation is concerned and wherever possible, the principle of progressive taxation has been definitely adopted.

The principle of progressive taxation is justified on certain assumptions. It is assumed that as income increases, the utility of each addition to the income decreases. It is further assumed that as income increases the expenditure on luxuries tends to increase, whereas necessaries are more important than luxuries from the point of view of economic welfare. It follows, therefore, that by taxing the rich more, we compel them to cut down luxuries. The sacrifice so entailed is not as great as the benefit to the poor on whom the tax proceeds may be spent.

Progressive taxation yields much greater revenue and hence it is more productive. It is very difficult to see how modern governments can balance their budgets today in the absence of the principle of progression.

Progressive taxation is more economical. The cost of collection of the taxes does not increase when the rate of the tax increases. About the equity of progressive taxation there can be no question. It calls forth a proportional sacrifice from the tax-payers. It places the heaviest burden on the broadest backs.

The principle of progression gives to the tax system much-needed elasticity or flexibility. When there is an emergency, only a little raising of the rates may be sufficient to meet the situation.

The opponents of the progressive principle have raised several objections against the system. We examine below some of these objections :—

(*i*) It is said that it is all arbitrary. The degree of progression is settled by the finance minister on no definite and scientific basis. It is purely his personal opinion. Clearly the objection is not to the principle but to the degree of progression. Although progression cannot be scientifically fixed, yet for practical purposes small differences do not matter. The members of the legislature are there to set right the angularities of the chancellor of the exchequer.

(*ii*) It is pointed out that the principle of progression cannot be advocated on the ground of promoting welfare, because welfare is subjective and cannot be measured. There is no scientific apparatus to test whether welfare has increased consequent on reduction of inequalities of incomes. The rich are perhaps vexed more than the comforting of the poor.

We may concede the strength of this objection. We cannot measure the increase in welfare. But few can deny that it is socially desirable that the rich should contribute more, for they can do so.

(*iii*) Again, it is said that progression will discourage saving, drive out capital and thus hamper trade and industry. It will, in short, be uneconomical.

But such dire consequences will follow only if the rate of progression exceeds the limits of reason and expediency. This has seldom been the case. Capital is not so sensitive as it is supposed to be.

(*iv*) The principle of progression is said to break down on scientific grounds. Its fundamental assumption that the same income measures the same satisfaction is not at all valid. Further, the law of diminishing utility may not hold good in the case of money. "Money," they say, " does not represent one good, but goods in general, and since human wants in general are unlimited, it may be questioned whether the wealthy person does require the additional pounds less and less. It may even be that his desire for additional income increases as his income increases. Such may be the case where an increase in income causes the possessor to move into a higher social circle, and so bring about an extension in his necessary wants."[1] Since the marginal utility of a rich man's income is less than that of a poor man, the rich should be subjected to progressive taxation.

But Robbins regards the use of the principle of diminishing marginal utility in this field as entirely illegitimate and unscientific.[2] Marginal utility being subjective cannot be verified by observation. As Robbins says, "There is no means of testing the magnitude of A's satisfaction as compared with B's......Introspection does not enable A to measure what is going on in B's mind, nor B to measure what is going on in A's." In progressive taxation, we assume that persons with same income derive equal satisfaction therefrom. But we cannot prove that this assumption rests on ascertainable fact because satisfaction cannot be measured. "It would be rather silly," says Robbins, " if we continued to pretend that the justification of scheme of things was in any way scientific."

On scientific grounds, the argument is unanswerable but progression can be advocated equally strongly on ethical and political grounds.

(*v*) It is said that progression will lead to evasion. But the possibility of evasion in proportional taxation is not less. It all depends on the social conscience.

Thus progressive taxation, whether it can be scictifically justified or not, is ethically sound, socially desirable and it conforms to the canons of economy, productivity and elasticity.

10. Taxable Capacity. The concept of taxable capacity has racked the brains of not a few economists and publicists. Dalton calls it "a dim and confused conception." He says, "Absolute taxable capacity is a myth and should be banished from all serious discussions on Public Finance." To the question whether taxable capacity can be measured, he thinks Cannan's 'No-how' is the best answer. Findlay Shirras, on the other hand, thinks that it is of great practical importance. "It is always wise and useful," he says. "for a government to know even roughly the limit that the country can contribute by way of taxation both in the ordinary and extraordinary circumstance." He goes on: "The necessity in post-war finance, especially of balancing budgets heavily laden with public debt of short maturity, has made the question of absolute taxable capacity a real and an abiding problem of taxation."[3]

What is taxable capacity ? The term taxable capacity can be used in two senses : (*i*) in the absolute sense, and (*ii*) in the relative sense. The absolute taxable capacity has been variously defined. It means how much a particular community can pay in the form of taxes without producing unpleasant effects. Relative taxable capacity, on the other hand, means the respective contribution which the two communities should make towards a common expenditure, *e.g.*, Provincial contributions to Central expenditure. Dalton says the former is a myth and the latter a reality. The relative limit may be reached without reaching the absolute limit, *i.e.*, we may have reached the limit of how much a particular community should contribute without reaching the limit beyond which it possibly cannot contribute.

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[1] Thomas, S.E.—*Elements of Economics*, 1936, p. 332.

[2] Robbins, L.—*The Nature and Significance of Economic Science*, 1931, Ch. VI.

[3] *Science of Public Finance*, 1936, p. 227.

There are two extreme views about absolute taxable capacity : (*a*) the capacity to pay without suffering, and (*b*) the capacity to pay regardless of suffering. In the former sense, taxable capacity is practically nil, for every tax must entail some suffering. In the latter case, there is practically no limit to taxable capacity except the one imposed by the extent of the resources of the community.

Sir Josiah Stamp defines taxable capacity as "the margin of total production over total consumption, or the amount required to maintain the population at subsistence level." This means the utmost that a community can pay "without having a really unhappy downtrodden existence and without dislocating the organisation too much." Findlay Shirras defines absolute taxable capacity as "the maximum amount which the citizens of a country can contribute towards the expenses of the public authorities, without having to undergo an unbearable strain. Briefly, taxable capacity is the limit of squeezability....It is the taxability of a nation, the maximum amount of taxation that can be raised and spent to produce the maximum economic welfare in that community."

Those definitions lack scientific precision and have an element of vagueness. Sir Josiah's "level of subsistence," and "unhappy down-trodden existence" and Shirras's "unbearable strain" and "maximum economic welfare" cannot be scientifically defined and laid down in exact terms. This, however, does not detract from the practical importance and the utility of the concept of taxable capacity. The meaning conveyed by the definitions given above is fairly clear, although we must admit that any attempt to measure precisely the taxable capacity is foredoomed to failure. Cannan's 'No-how' is really the correct answer.

When is the limit of taxable capacity exceeded ? Views also differ as to what are the symptoms to show that taxable capacity has been exceeded. Sir Josiah mentions two limits : (*a*) the check to total production, and (*b*) the check to total revenue yield. But the check may be due to causes other than excessive taxation. Taxation is not the only factor that affects production. Ellinger[1] thinks that " the limits would be reached when so much is taken out of the taxpayers' pockets that the incentive to produce is reduced, and when insufficient remains to provide the necessary capital to make up for wastage and to set to work new workers in an increasing population. He obviously ignores the beneficent effect of public expenditure on production.

That fact is that the taxable capacity is not rigidly fixed. It is a moving point. It is relative to so many factors any change in which is bound to change our estimate about the taxable capacity of a nation. Findlay Shirras gives the following facts which determine the taxable capacity of a nation :[1]

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[1] Quoted by Dalton in *Principles of Public Finance*, 1943, p. 136.

(1) *The Number of Inhabitants.* It is quite obvious that the larger the number, the greater is the taxable capacity of the community to contribute towards the expenses of the government. From this point of view India is well placed. Its taxable capacity will infinitely increase when the proper economic development of the country is brought about.

(2) *The Distribution of Wealth in the Country.* If wealth is more equally distributed, the taxable capacity will be correspondingly reduced. But if there are large accumulations of wealth in a few hands. the government can raise more money by taxing the rich.

(3) *The Method of Taxation.* A scientifically constructed tax system with a wise admixture of the various types of taxes, direct and indirect, is sure to bring a larger yield. Our tax system is not so much diversified ; we have taxes on large agricultural incomes and none on inheritance. This certainly reduces the taxable capacity.

(4) *The Purpose of Taxation.* If the purpose of taxation is to promote welfare of the people, they will be more willing to tax themselves. For a popular cause, the people will be willing to stretch their capacity to the utmost. If the government proceeds to raise money for fighting famine, disease or spread of education, there will be a surprising expansion in the yield of taxes. But if the bulk of the public funds is to be spent on the maintenance of foreign armed forces and for the upkeep of a costly civil service in which foreign element is predominant, as was the case in India, the taxable capacity must correspondingly shrink.

(5) *The Psychology of Tax-payers.* Much depends on the people's attitude towards a government. A popular government can galvanise the spirit of the people and prepare them for the greatest sacrifice. An appeal to patriotism is often the cause of the success of a financial measure. This is what makes war loans successful. Psychology of the people is an important factor, and unless they are properly approached they may be unwilling to tax themselves.

(6) *Stability of Income.* If the income of the citizens is precarious, there will be not much scope for further taxation. The vagaries of the monsoons in India account for a lower taxable capacity. It is only on stable incomes that long-term financial arrangements can be based.

(7) *Inflation.* It lowers the purchasing power of the people and it cripples many ; it has an adverse affect on taxable capacity.

All these factors must be taken into account before we can have an idea about the taxable capacity of a nation. It may be that on account of the multiplicity of the factors influencing taxable capacity, we cannot measure this capacity. But this does not mean that the attempt is useless. The interest lies in the journey itself rather than in the destination. As Findlay Shirras puts it, " A road leading to an important centre has often many crossings, signposts, danger signals, but this does not lessen its value to the cautious sojourner."[1]

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[1] *Science of Public Finance*, 1936, p. 234.

11. Feasibility of a Single Tax. Attracted by its simplicity, many writers have advocated the imposition of only one tax. It has a long history behind it. It has also been advocated in different forms.

Physiocrats like Quesnay and Turgot advocated a single tax on land. According to them, land was the only source of wealth. Land alone yielded a net return (*produit net*). They advocated a single tax (*impot unque*) on this net return.

Henry George of San Francisco advocated a single tax on unearned increment in land values. He was socialistically inclined and he believed that the monopolisation of land by a few was the cause of the poverty of the masses. Rent, according to him, was an unearned increment and he advocated the appropriation of the entire rent by the State through taxation. He said that no other tax would then be necessary.

His thesis has not been accepted and his proposal is objected to on the following grounds :—

(*a*) It is said that the tax revenue will not be sufficient to meet the large expenditure of a modern government.

(*b*) It would penalise the holders of one type of property leaving the others scot-free. Not only is it unfair but it will also lead to evasion as the landlords would try to acquire some other form of property instead. It would not fairly distribute the tax burden.

(*c*) It is not easy to calculate how much is exactly unearned and how much of the increment is due to the foresight, personal effort or improvements by the land-owners.

(*d*) Compensation will have to be paid by the State in cases where the land values went down. The government would become unnecessarily involved in fluctuations of land values.

(*e*) There will be several administrative difficulties.

Single Tax on Income. The socialists advocate a single tax on income. Every income should be taxed. It is said that a single tax on income can be made to steer clear of the two major difficulties facing a single tax on land. By taxing all incomes and higher incomes sufficiently steeply adequate funds can be raised. Also, through devices like graduation and differentiation, the tax burden can be fairly distributed. But even this proposal is not free from objections.

(*a*) It will be vexatious, as everybody will be put to the inconvenience of having to pay tax.

(*b*) The cost of collection of a tax from numerous small incomes will be almost prohibitive. This, however, can be overcome by administrative improvements.

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[1] *Op. cit.*, 1936, p. 31.

(*c*) When only one tax is imposed, evasion will be a much more serious matter. Attempts to stop the loopholes will make the tax system even more vexatious.

(*d*) There will be administrative difficulties.

(*e*) The inheritors of wealth,—very fit cases of taxation—will escape if only incomes have to be taxed. This can be overcome by treating inheritance as taxable income.

(*f*) It will check saving and hence accumulation of capital. This would retard the development of trade and industry. This objection can be met by exempting savings. But that would mean taxing not the personal income but personal expenditure. This also would present administrative difficulties and leave many loopholes.

Thus a single tax on income, too, on the whole, is beyond practical finance.

Another variety of a single tax is on the capital value of the property. But we have already said that taxation of income is a better index of a man's ability to pay than the amount of property he holds.

Besides objections raised against particular forms of a single tax, two arguments of a general nature applicable to all forms of a single tax can be advanced :—

(*a*) It is bound to create anomalies as between persons, and these can be rectified only by a multiple tax system.

(*b*) Evasion is much easier in case of a single tax whereas there are counter checks in a multiple system.

Single tax was a dream of theorists. It has now few advocates among practical statesmen. Then discussion has a purely academic interest, for a single tax is definitely beyond the sphere of practical finance. Every country has adopted a mixed or multiple system of taxation.

12. Local Taxation[1]. Since it is the local authority which comes in most intimate contact with the citizen, its tax structure has an importance of its own. The theory of local taxation must receive, therefore, due attention from the economists.

The most important problem of local finance is the adjustment between Central and Local financial relations. This presents a dilemma. There is an inherent conflict between democracy on the one hand and efficiency on the other. If, in order to satisfy the dictates of democracy, a great deal of local autonomy is conferred on local bodies, it will sacrifice efficiency. Left to themselves local authorities cannot maintain requisite standard of services. If for the sake of efficiency, Central control over Local services is increased, local patriotism has to be sacrificed. Local knowledge and understanding are essential for local administration. Disparity between local wealth and local needs complicates the solution of this dilemma. Local wealth is generally in inverse relation to local needs. The poorer a locality, the greater are its social needs, and *vice versa.* Local financial opportunity is not matched by local executive and administrative ability. The solution of this dilemma is to be sought in a careful combination of local taxation with differential grants from the Centre.

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[1] *See* Hicks, U.K.—*Public Finance*, 1948, Ch. XV.

Of the Central-Local relations there are three broad types : In effective federations, local units have very wide financial powers so that the taxing rights overlap and create confusion. In the strongly knit unitary States, the local units enjoy little financial independence. They work under the strict control of agents of the Central government, and they cannot effectively control their revenues. In between these two extremes, there is a situation in which, within the frame-work of a unitary State, the local authorities enjoy considerable degree of local autonomy in economic and financial matters. But whatever the type, the increasing pressure of modern economic and political needs has strengthened the hold of the Central government on local finance everywhere.

Just as we have canons of Central taxation, we may also formulate some canons of local taxation. What are the criteria which a good local tax should satisfy ? Like other taxes, a local tax should also conform to the canons of equality, certainty, economy and convenience. But there are some special characteristics of a good local tax inasmuch as local finance differs from central finance in certain fundamental respects.

(1) One important characteristic of local taxation is that their yield should be *stable* and should not be affected by trade conditions. It is more necessary for a local or regional government to practise " sound finance." A local body cannot be allowed to borrow indefinitely, because of the danger of default, whereas there is practically no limit to the borrowing powers of the Central government. It is very essential, therefore, that local revenues should be reasonably stable and should be independent of cyclical fluctuations in trade ; otherwise during depression they will dry up and local services will be paralysed. This happened in the U.S.A. in the 'thirties.

(2) Localisation of base is another essential feautre of a local tax. Unless the tax base is localised within the jurisdiction of the local authority, it will not be able to exercise an effective control over its budgets and there will be a corresponding breach in local autonomy. But there is one danger in this local independence. The tax level may be raised so high as to drive out capital and enterprise. Small areas have small financial opportunities and large opportunities of emigration. High local taxation in Bombay drove out the cotton mill industry to centres like Hyderabad, Sholapur and Ahmedabad. It is, therefore, very necessary that a local tax should not exaggerate local disparities in wealth. Such considerations lead us to the conclusion that as far as possible steeply progressive taxation should be avoided in local finance. Local taxes should be proportional and even mildly regressive.

(3) 'Local tax for local use' is another desideratum of a local tax. Overlapping of tax rights between national and regional authorities should be avoided as far as possible. This would ensure local autonomy. Competitive exploitation of the tax resources may lead to double and treble taxation. They also cause distributional disadvantages, which may hamper the Central government in making its own tax structure properly progressive.

Considering all these factors, taxation of real estate, *i.e.*, land and buildings, seems to be the best for local purposes. Taxes on lands and buildings give a stable yield and their base is unequivocally localised. Their stability is due to the fact that "its velocity of circulation is notoriously slower than that of other form of property so that its value is less volatile." Taxes on real estate have another superiority. They occupy so great an importance in the economic life of every citizen that even a small *per capita* tax burden is enough to yield a large revenue. "Thus subordinate governments can raise large independent revenue by this means without running their heads near the ceiling."[1] Moreover, these taxes are in little danger of being poached by the Central government. In normal times, the Central government is self-sufficient and in emergencies, the Central government cannot hope to raise additional revenue from these taxes since they are notoriously stable.

There is, however, one weakness of taxes on real estate. They are based on out-of-date valuations. Local bodies cannot afford to employ expert personnel for valuation which is very expensive. If this is provided by the Central government even this defect can be removed. Another trouble with these taxes arises from multiplication of exemptions, so that the rate is pushed up against those who cannot secure exemption. In principle the objection against taxes on real estate is that their revenue is inflexible and rigid from the point of view of local authority and regressive from the point of view of the tax-payer. But we have already explained that stability and regression of a local tax is its virtue rather than vice.

What are the taxes which are indicated by this analysis as suitable for local taxes ? In a new country, the best tax is on land values. Entertainment tax, tax on vehicles, motor taxation, octroi, tax on professions, cycle tax, tax on animals, etc., also seem to be quite suitable.

A system of grants as an equaliser is also very essential. It will tone down the disparity between local needs and local wealth. Local resources have to be supplemented. But the grants should not be too liberal, otherwise there will be irresponsible spending. System of costing and accounting must be improved. A grant for general purposes is better than a percentage grant for specific purpose for the latter is likely to distort seriously the local budgets.

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[1] **Hicks**—*op. cit.*, p. 274.

CHAPTER XLV

INCIDENCE OF TAXATION

Incidence and its importance. The problem of the incidence of a tax is the problem of who pays it. Taxes are not always borne by the people who pay them in the first instance. They are sometimes shifted on to other people. Incidence means the final resting place of a tax. The incidence is on the man who ultimately bears the money burden of the tax.

We may distinguish between *impact* and *incidence.* The impact of the tax is on the person who pays it in the first instance and the incidence is on the one who finally bears it. If an excise duty is imposed on sugar, it is paid in the first instance by the sugar manufacturer ; the impact is on him. But the duty will be added to the price of the sugar sold, which, through a series of transfers, will ultimately fall on the consumer of sugar. The incidence is, therefore, on the final consumer.

Incidence is not shifting. Shifting means the process of transfer, *i.e.*, the passing of the tax from the one who first pays it to the one who finally bears it. It is through this process of shifting that the incidence of a tax comes finally to rest somewhere. The process of shifting may be slow or may be only partially effective so that the burden of a tax may not fall entirely on the person who is intended to bear it. Shifting is also known as *repercussion.*

Shifting is quite different from evasion. Evasion is to avoid payment. I may give up the consumption of a taxed commodity and evade the tax. This evasion is quite legal. In evasion, there is no question of shifting the tax to somebody else ; it is not paid at all.

The term 'incidence' should be distinguished from the effects of taxation. The effect of a tax refers to incidental results of the tax. There are several consequences of the imposition of a tax which are quite distinct from the problem of incidence. The imposition of an excise duty on sugar, we have seen, is shifted ultimately to the consumer of sugar. The incidence is on the consumer. But the effects of this duty may be far-reaching ; a heavy excise duty may cripple the industry. The manufacturer's profits will be reduced. Wages may be reduced. Labour and capital may have to leave the industry. Thousands of middlemen engaged in the distribution of sugar may find their earnings reduced. Reshuffling of their family budgets may affect the demand for certain other goods. The consumption of sugar may decrease and that of substitutes may increase. All these are the effects of the tax. It is a much wider problem as distinguished from the incidence which is a narrow and a special problem of finding who bears the money burden of the tax.

We may also distinguish between the *money burden* of a tax and the *real burden.* The money burden of a tax is represented by the total amount of money received by the treasury. If a consumer has to spend Rs. 5 more per month on the sugar consumed by him on account of the levy of a duty on sugar, it is the money burden that he has to bear. But he may have reduced the consumption of sugar which may mean a reduction of his economic welfare. He may have to pinch in the consumption of some other commodities too. This, pinching, inconvenience, sacrifice or, in short, loss of economic welfare is the real burden of the tax. In incidence, we are concerned with the money burden and not the real burden.

The study of incidence is very important. The tax system is not merely aimed at raising a certain amount of revenue, but the aim is to raise it from those sections of the people who can best bear the tax. The aim, in short, is to secure a just distribution of the tax burden. This obviously cannot be done unless an effort is made to trace the incidence of each tax levied by the State. We must know who pays it ultimately in order to find out whether it is just to ask him to pay it, or whether the burden imposed on him is according to the ability of the tax-payer or not. If the tax system is to conform to Adam Smith's first canon of taxation, *viz.* the canon of equality, it becomes imperative to make a careful study of the reactions and repercussions of each tax and find out its final resting place.

There are certain taxes, called the direct taxes, which are borne by the people who pay them first. The incidence in such cases is apparent. But the tax system of a country is not merely composed of direct taxes. There are indirect taxes also whose reactions are a complicated affair. These taxes are intended to be shifted. But in actual practice, on account of economic friction, the shifting may not take place at all or it may be partial, or the tax may be shifted on to a class of people quite different from those intended to bear.

If Public Finance is to serve as an instrument of social justice, the question of incidence at once assumes a great importance. The rich have to be taxed and the proceeds have to be spent for the benefit of the poor. If you have to tax the rich, the incidence must be on the rich, otherwise the object is not served. We must, therefore, follow each tax and make sure that it finds a rich home to rest in.

2. Direct and Indirect Taxes. We have said before that the question of incidence is very simple in the case of a direct tax, because the impact and the incidence are on the same person. But, in the case of an indirect tax, the impact is on one person and the incidence on another. A direct tax is not intended to be shifted, whereas an indirect tax is so intended. The question of incidence, therefore, really arises in the case of indirect taxes. Before we trace the incidence of individual taxes we would like to make the distinction between direct taxes and indirect taxes a little more clear and study their relative merits and demerits.

Taxes on commodities are generally called indirect taxes, for they are ultimately shifted completely or partially on to the consumers, whereas they are first collected from the dealers or producers. But we should remember that the mere fact that a tax is a commodity tax does not make it an indirect tax. A tax can be called an indirect tax, if its burden can be shifted and this happens when its price is affected by the tax. It is just possible that the commodity may be taxed, yet its price may remain unaffected. In this case, the consumer is not touched, and the tax will be called direct and not indirect, even though it is a tax on a commodity.

A lump-sum tax imposed on a monopolist or as a percentage of monopoly net revenue is not shifted, while a monopoly tax in proportion to the output tends to be shifted. In the former case it will be a direct tax, and in the latter case it will be indirect. The inheritance tax is commonly considered a direct tax. It falls on the successor and it tends to stay there. But the predecessor, while he was alive, may have taken an insurance policy to cover the amount of the tax. In this case, it imposes an indirect money burden on him. Income-tax, again, is a direct tax but in exceptional cases a part of it may be shifted. To that extent it will become an indirect tax. We may thus conclude by saying that we cannot draw hard and fast lines between taxes which are direct and those which are indirect. The distinction between the two types is settled by the question whether the tax has been shifted or not. If it is shifted, it is indirect otherwise direct.

3. Relative Merits and Demerits of Direct and Indirect Taxes. We compare these two forms of taxes not with the object of choosing whether we should have the one or the other. No country relies exclusively on one type. Both direct and indirect taxes are needed to make up an equitable and adequate tax system. "I can never think," said the Great Scotman, "of direct and indirect taxation except as I should think of two attractive sisters who have been introduced into the gay world of London, each with an ample fortune, both having the same parentage—for the parents of both I believe to be Necessity and Invention—differing only as sisters may differ......"[1] However, direct taxes are better in some respects and indirect taxes in some other respects.

In favour of Direct Taxes we can say : (*a*) They are more equitable as progression can be applied to them. The rate of the tax is varied to make the tax conform to the ability to pay.

(*b*) They are economical as the cost of collection is small. There being no intermediary between the tax-payer and the State, no part of the tax evaporates in transit.

(*c*) Their yield can be calculated with a fair degree of precision. The tax-payer is also certain of the amount that he has to pay.

(*d*) They have a high degree of elasticity. Income-tax remarkably responded to the enormously enhanced needs of the State during war.

(*e*) They create a civic consciousness among the tax-payers. A man who pays a direct tax feels that he is contributing towards the State expenditure. He is expected to take keener interest in civic affairs.

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[1] Quoted by Findlay Shirras—*Science of Public Finance*, 1936, p. 297.

On the other hand, direct taxes have some drawbacks too. (*a*) They are very inconvenient to pay. Every tax-payer feels the pinch. Hence they are not popular. The tax has to be paid in a lump sum; the filling of returns is a complicated affair; and there is a lot of harassment.

(*b*) They can be easily evaded and the State defrauded of its due. A direct tax is a tax on honesty.

The Merits of Indirect Taxation are: (*a*) It is convenient. We pay the tax when we buy a commodity, and at a time when we can afford it. It is paid in small trickles rather than in a lump sum. 'Many people prefer to be taxed in the dark.' The tax-payer does not feel that he is paying it. The tax is wrapped in the price of the commodity he buys.

(*b*) It is very difficult to evade an indirect tax.

(*c*) Indirect taxes can also be made more equitable by being imposed on articles generally consumed by the rich. That is why luxuries are generally taxed at a higher rate.

(*d*) When imposed on necessaries of life or articles for which the demand is inelastic, indirect taxes are also fairly elastic.

(*e*) They have a beneficial social effect in that the consumption of harmful drugs and intoxicants can be discouraged by means of such taxes.

The demerits of indirect taxes are: (*a*) They are uncertain. It is not always possible to anticipate the various repercussions of a tax imposed on a commodity. A finance minister cannot precisely calculate the estimated yield of a tax.

(*b*) They are regressive. Every consumer of the taxed commodity, rich or poor, pays the tax at the same rate. Therefore, the real burden on the poor is greater than on the rich. If the tax is imposed on the necessaries of life, its regressive character is accentuated. Acceding to Engel's Law of Consumption, the bulk of a poor man's income is spent on necessaries of life. The poor man pays the tax, therefore, on almost all his income, while the rich man pays it on a relatively smaller portion of income spent on necessaries of life.

(*c*) Indirect taxes do not develop any civic consciousness in the tax-payer.

(*d*) Although the shop-keeper is considered an unpaid tax collector, yet it is thought that the cost of collection of certain indirect tax is very heavy. In the case of customs duties, a highly-paid staff of custom officials, appraisers, raiding parties to prevent smuggling have to be engaged. These taxes are uneconomical in another way as well. The taxed commodity passes through a number of middlemen and each adds something to the tax, so that the final consumer pays much more than the State receives.

The distinction between direct taxes and indirect taxes is not of much practical importance. We cannot assume that the entire burden of direct taxation falls on the rich and that of indirect taxation on the poor. Indirect taxes, like taxes on luxuries, fall on the rich and not on the poor. It is, however, generally true that direct taxes like inheritance tax and income tax and super tax fall exclusively on the rich. In a good tax system we must have a proper balance between direct and indirect taxation. One corrects the other. Indirect taxation relieves exclusive pressure on the rich and makes the system of taxation broad based.

4. **The Diffusion Theory of Taxation.** The advocates of the diffusion theory say that a tax gets diffused automatically in the community very widely so that each individual tax payer bears only a small proportion of the tax, a proportion which he can and ought to bear. The idea is that the tax burden is automatically distributed equitably among the various sections of the community. Hence it is useless to bother about incidence. It is impossible in this world of complicated exchanges to trace the shifting of a tax which settles the question of ultimate incidence. In other words, the taxing authority may comfortably rest in the belief that all is well with their tax policy. Even if a tax contains an initial element of injustice adjustments are sure to be made and the iniquity will be either eliminated or not felt at all. Lord Mansfield said towards the end of the eighteenth century, "I hold it to be true that a tax laid in any place is like a pebble falling into and making circles in a lake, till one circle produces and gives motion to another, and the whole circumference is agitated from the centre."[1] This is how a tax gets diffused or spread throughout the community.

The diffusion takes place through the process of exchange. If a tax is imposed on a commodity, it is shifted little by little on to the consumers, concealed in the price of the commodity. A tax on profits will enter the cost of the commodity. A tax forms a part of the cost of production of a commodity, or of the cost of rendering a service and as such it moves from person to person along with the commodity and comes to rest where it ought to. It does not affect any particular part of the community adversely. Canard compares taxation with the operation of cupping. "After taking the blood from the vein," he says, "it is no more bloodless than any of the other veins owing to the circulation of blood through the body."[2]

It cannot be denied that some diffusion of taxation does take place. But it is too much to say that, through this diffusion process the burden of taxation is automatically adjusted according to the taxpayers' faculty to bear the tax. If it had been so automatic, finance ministers would not have been at pains to work out the probable effects of a tax and find out its ultimate resting place. If the taxes were to be diffused according to some unknown law, the Governments would not have tried to devise some taxes to be borne by some particular class of people. Nobody seriously believes that the taxes are spread fairly throughout the community automatically, otherwise how are we to explain the hue and cry raised whenever a tax is imposed. The taxes do stick to certain persons. It is not like the cupping operation but like the cutting of a branch of a tree or a limb of the body.

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[1] Quoted by Findlay Shirras in *Science of Public Finance*, 1936, p. 336.
[2] *Ibid.*, p. 347.

There are certain taxes like the poll tax, inheritance tax or income tax in which there is no shifting at all. There is not the least diffusion. The theory has thus only a limited application. It applies to indirect taxes only and even in their case there is no diffusion throughout the community.

The diffusion theory assumes free and perfect competition which does not actually exist. There is a good deal of economic friction which obstructs the shifting of a tax.

To sum up : The diffusion theory is unsound in principle, contrary to actual experience and belief, and it has got only a limited application. Its only redeeming feature is that it emphasizes the fact that the taxes do not stay where they are first imposed. But we cannot rely on a theory like this to distribute the tax burden in the community fairly and completely.

Let us now consider the incidence of some important taxes.

5. **Commodity Tax.** A tax on a commodity tends to be shifted from the producer forward to the consumer and from the consumer backward to the producer. A tax on production of a commodity tends to raise its price and will, therefore, be normally borne by the consumer. But a tax on consumption is likely to check consumption and tends to be shifted backward to the producer.

The extent to which the tax will actually be shifted will depend upon the nature of demand and supply curves. If demand is inelastic, as is the case with the necessaries of life, the people must buy the commodity. The producer will be in a stronger position and almost the entire burden of the tax will be shifted on to the consumer. But in the case of elastic demand, the people will buy less. In that case, the price will not rise by the full amount of the tax. The tax will, therefore, be borne partly by the buyers and partly by the sellers. How much exactly? It will depend on the degree of elasticity. In the same manner, if the supply is inelastic, as in the case of a perishable commodity, the seller cannot withdraw the supply. His position is weak. The tax will stick to him. In the case of elastic supply, he can shift the burden on to the consumers. "As a rule, the consumer bears a smaller part of the tax when the demand is more elastic than the supply than he does when the supply is more elastic than the demand."

It is possible that the price may not rise at all. This will happen when the consumers have been able to discover an untaxed supply of the commodity or a satisfactory untaxed substitute. In this case, the entire burden of the tax will fall on the producer or the seller.

On the supply side, the laws of return will also exert their influence. The taxing of a commodity tends to check its demand which, in its turn, will check production. Now if the industry is subject to the law of increasing returns, the reduced production will be obtained at a higher cost and, in the case of the law of diminishing returns, at a lower cost. In the former case, the price will be higher than in the latter with a corresponding burden on the consumer.

Much also depends on the amount and the method of taxation. Nobody bothers about a small tax. No producer would like to annoy his customers for a paltry sum. He would cheerfully bear it himself. Only when the tax is heavy will the shifting take place. A tax on marginal output will raise the price and not the one on the surplus output.

The nature of the commodity also will make a difference. A tax on a commodity like sugar gets rapidly adjusted and shifted. But a tax on a house cannot be so readily shifted for rent is fixed for a period and during the currency of the lease no change can be made.

Other factors which govern the course of shifting of a commodity tax are whether competition is perfect, and whether labour and capital are freely mobile. Only in case of free and unfettered competition can the tax be passed on to the consumer, otherwise it will stick to the producer. If labour and capital are freely mobile, it will add to the ability of the producer to shift the burden on to the consumer. If, on the other hand, large fixed capital is locked up in the industry the position of the producer is correspondingly weakened, and the probability is that the tax burden will be borne by him. He cannot withdraw his capital. He must continue in the field even when he is losing for a time.

Thus incidence is a very complicated affair. It is a part of a large problem of price determination. There are various conflicting influences on price. We say that a tax on commodity *tends* to be borne by the consumer. But this tendency may or may not be actually realised. Unless the price is affected, the consumer is not touched, and he is touched only to the extent that the price is raised by the imposition of a tax.

6. Tax on Monopoly. We have said that the question of incidence is a part of the large question of the theory of value. As value determination differs in the case of a monopoly from the value determination under competitive conditions, the incidence of a tax on monopoly works out differently.

The monopoly tax may be (*a*) independent of the output of the monopolised product ; or (*b*) it may vary with the output *i.e.*, increase or decrease with the output.

When the tax is independent of the quantity produced, it may either be a lump-sum tax on the monopolist or a percentage of the monopoly net revenue (profit). In both these cases, it will fall on the monopolist. He cannot shift it to the consumer. This could be done by raising the price. But he is already supposed to have fixed a price which yielded him the maximum monopoly net revenue. A price higher or lower than this must have meant a less monopoly profit. If it had been possible for him to raise the price consistent with the policy of maximising his profit, he would have done it already. Any alteration in the price, thus, would be at the expense of his profit. That being the case, he must now pay the tax out of his own profit. He will get maximum profit now after paying the tax by leaving the selling price unchanged and the consumer unaffected.

It is possible that, instead of re-calculating how he would maximise his profit after paying the tax, he may simply put up the price shifting the tax to the consumer. But by so doing he may have reduced his monopoly profit. "He may prefer this to a rather greater profit at the expense of a greater effort."

In case, however, he has been charging less out of consideration for consumers' welfare than what he could charge for maximising his profit, he will, when the tax is imposed, take in the 'slack'. To this extent the burden of the tax will be shifted to the consumers.

Now let us see what happens when the tax varies directly or inversely with the quantity of the commodity produced. In this case, as discussed in the previous section, elasticities of demand and supply and the influence of the laws of returns will have to be taken into account. The tax will enter into the cost of production. It will mean an addition to the cost of each unit produced. Taxing of the commodity, therefore, raises the price which will tend to reduce the demand. If, however, the demand is inelastic, it cannot be appreciably reduced and the tax will be borne by the consumer. If the demand is elastic, the consumers may buy less when the tax has raised the price. In this case, the tax will partly be borne by the monopolist. Instead of facing a decline in demand, the monopolist may reduce the price and decide to bear the tax himself. If the supply is more elastic, then the producer is in a stronger position. Thus if the demand is more elastic than the supply, the consumer will bear less burden of the tax ; and if the supply is more elastic than the demand, then the producer will bear less.

If the production of the commodity obeys the law of increasing returns, the reduction in production, consequent upon the imposition of a tax, will raise the price more than if it were subject to the law of diminishing returns. The burden on the consumer in the former case will be greater than in the latter case. When the marginal costs are constant and the demand curve facing the monopolist is a straight line, then, according to the theory of monopoly price[1], the price of the taxed commodity will be raised by half the amount of the tax ; under competition it would have risen by the full amount of the tax. In case the demand curve is concave, the rise in price will be greater than this. Where the demand curve is so concave as to make the marginal revenue curve parallel to the demand curve over the relevant range, the price will be raised by the full amount of the tax. In case, however, the demand curve is not only concave but indicates constant elasticity, the ratio between price and marginal cost will be constant. The marginal revenue being necessarily less than price, the slope of the marginal revenue curve will be less than that of the demand curve so that the price will rise by more than the tax.[2]

If in order to stimulate production, the rate of the tax varies inversely with the output, then the monopolist will be tempted to produce more and keep the price low. The burden of the tax will be entirely on the monopolist who will, in fact, be transferring a part of his monopoly profit to the consumers.

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[1] *See* Mrs. J. Robinson—*The Economics of Imperfect Competition*,

[2] Mrs. U.K.Hicks—*Public Finance*, 1948, pp. 173-74,

The fact is that, owing to the exceptional ability of the monopolists to manipulate the price and control the market, the incidence of a monopoly tax is uncertain.

7. Taxes on Imports and Exports. Import duties are generally, and almost exclusively, borne by the home consumer. The duty paid by the importer is added to the price that he charges from next purchaser, and so on. The duty is ultimately shifted to the consumer. Only in very rare cases the burden of such duties may be shifted to foreign producer. If, for instance, our demand for the imported product is elastic so that we may or may not buy it, and the supply is inelastic and the foreign producer has no alternative market, then in such a case the burden can be shifted to the foreign producer. But these conditions are rarely present and, unless they are present, the duty must be borne by the home consumer.

Export duty is similarly borne by the exporter. The price in the world markets is fixed so far as he is concerned. No individual exporter is in a position to influence the world price. But, here again, we can imagine a situation in which the exporter is in an exceptionally strong position so that the duty can be shifted to the foreign purchaser. For example, we may have a monopoly of the supply of a commodity and the demand of the foreigners for our product may be inelastic, whereas so many other alternative markets may be open to us. In such circumstances, we can certainly make the foreigner pay the export duty by raising the price of the commodity by the full amount of the duty. But such conditions are very rare and, unless they are present, the export duty must be borne by the exporter. Dalton lays down this rule: "Taxes on imports and exports may then be regarded as obstacle to exchange and, in accordance with the preceding theory, the direct money burden of any such obstacle is divided between the two parties to the exchange in inverse proportion to the elasticities of their respective demands. In other words, it is divided in direct proportion to the urgencies of their respective needs, which are satisfied by the exchange."[1]

8. Taxation of Land. The value of land depends on two sets of factors: (*a*) Natural factors like the fertility of the soil, the situation of the land and some other natural conditions; and (*b*) investment of capital in drainage schemes, anti-erosion measures, irrigation facilities and other measures necessary to increase and sustain productivity. The tax depending on the first set of factors is a tax on economic rent and has a tendency to fall on the owner. He cannot shift it to the tenant, for economic rent is determined by factors independent of a land tax. The owner is supposed already to be charging rent fully measuring the superiority of his land over the marginal land. But in case, through ignorance, indifference or indulgence, he has not been charging full economic rent, he will, when the tax is imposed, sharply look round and take in the 'slack'. To this extent the tax is shifted to the tenant.

The tax of this nature, *i.e.*, the tax on economic rent, cannot be passed on to the consumer, for the consumer can only be reached through the price. We know that economic rent does not enter into price. The raising or lowering of the rent does not affect price. The fact that the tax is paid by the occupier makes no difference. If he pays it in the first instance, he can deduct it when he pays the rent to the owner.

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[1] Dalton—*Principles of Public Finance*, 1943, p. 57.

Tax on economic rent is thus borne by the owner of the land and not by the tenant or the consumer of the product.

But, where the owner can vary his investment in land, he will reduce this investment when the tax is imposed. This will affect the yield and hence the price of the commodity. In this case, *i.e.*, in the case of improvements, it is shifted to the consumer.

Tax on building sites also tends to be thrown on those owners of sites who enjoy surplus income on account of more favourable situation of their sites.

Can the land tax be shifted to a prospective purchaser of the land ? No, the tendency is that it will be borne by the present owner. The purchaser, while purchasing land, will bear in mind that he will have to pay the tax. He will, consequently, offer less price. The tax is thus capitalised or absorbed in the lower price that the land will command. This will happen to the extent that future tax payments can be accurately forecast. But there is also a neutralising tendency. Future increases in land values may also be anticipated and more price offered.

9. **Tax on Buildings**. There are two parties in immediate contact with each other so far as housing is concerned, *viz.*, the owner and the occupier. If the tax is imposed on the owner, he will try to raise the house rent and thus shift the tax to the occupier or the tenant. But he cannot do this during the currency of the lease. Further, there may be a rent law controlling rent and forbidding the landlord from raising them. Even if he can raise the rent, the tenant may shift to some other house preferring less accommodation to higher rent. In such cases, therefore, the incidence will be on the landlord, at any rate, for some time. But the effect will be that building houses for letting out may not remain a paying proposition. A heavy tax will check building activity and the remuneration of the builder and of other people engaged in the trade may fall. The demand for building sites may decrease. If they try to sell off, the new purchaser will bear in mind the tax and offer correspondingly less. But, in the course of time, the supply of houses will fall off and the rents must rise thus shifting the burden, to some extent, to the tenants. Thus the tax may fall partly on the owner, partly on the builder and partly on the occupier.

If, on the other hand, the tax is imposed on the occupier, it will tend to stick to him. It is not easy to find a new house nor so convenient to shift. One likes to stay on where one is. The demand for a house is inelastic. The landlord, therefore, is in a much stronger position. The tax will thus stay where its first impact is. But if the occupier is a shop-keeper, then he may be able to shift the tax to his customers in the neighbourhood by raising a bit the prices of the commodities he sells. We must remember, however, that the development of the means of communication and transport brings the travelling salesman to our very door and weakens the grip of the neighbouring store.

We may thus conclude that the tax on buildings will fall generally on the occupier but under certain circumstances may be shifted to the owner, the builder or the customer.

10. Property Tax. This tax is really income-tax and is intended to supplement it. When any form of property is taxed, its price must rise. This will check demand and later lead to readjustment in supply so that the productive resources will be diverted to other channels. Conversely, removal of the tax or lowering of it will attract productive resources. In the case of durable goods, whose production takes time, the supply will only be gradually affected. This applies to buildings. What about capital goods? The capital equipment which is used in the production of taxed goods must fall in value. But the extent to which it will fall will depend, among other things, on the nature of demand, the life of the plant and how far it is specific to that use. But when capital goods are taxed directly, their value is immediately affected. The more durable the goods are and the more likely the tax is to continue, the greater will be the effect on capital values, than when the goods are short-lived and the tax is imposed only temporarily.

11. The Incidence of Rates. Rates are imposed by local bodies on immovable property in proportion either to the annual value or the capital value of the property. Their incidence is just like incidence of building taxes discussed above. They will be borne by the owners, occupiers or customers (in case the property is used for business purposes) and the respective burden on each will depend on the economic friction and the relative bargaining strength of the parties, or, what comes to the same thing, on the relative elasticities of demand for, and supply of, the property taxed.

As a general rule, the tax on the site value will ultimately be borne by the owner and that on building value, or what may be called the beneficial rate, by the occupier or customer (in case of business premises). Much will depend on the willingness or the ability of the occupier to shift to another site. The more he is willing or able to shift, the greater will be the tendency of the rate falling on the owner. In the short period, the mode of collection is also important. Wherever its impact is, whether on the owners or on the occupier, in the short period, it will tend to stick there.

It is well known that the local rates vary from one municipality or district board to another. The tax-payers, therefore, tend to move from the high-taxed area to the low-taxed area. The existing disparities in local tax levels are thus accentuated and it may have far-reaching effects on the distribution of productive resources in the country.

12. Death Duty. In almost all advanced countries, death duties form an important part of the tax system. Death duties take two forms : Estate Duty and Succession Duty. The estate duty is levied on the total value of the estate (*i.e.*, movable and immovable property) left by the deceased irrespective of the relationship of the successor. It is graduated with reference to the total value of the property. The Succession Duty varies with the relationship of the beneficiary to the deceased. It is graduated on the basis of the windfall element which increases with the distance of relationship. Further, it takes into consideration individual share of successor and not the total value as in estate duty.

In England, the death duty is a combination of both estate duty and succession duty. In Germany, the duty imposed also takes into consideration the property already held by the beneficiary. Other things being equal, the rate of the duty will be higher if the beneficiary already owns a large property. The Estate Duty Bill was introduced in the Indian Parliament in 1948 and the relevant clauses of the Bill generally follow the provision of the legislation in the United Kingdom.

Where is the incidence of death duties ? Is the incidence on the deceased or the beneficiary, *i.e.*, the successor ? The owner is dead and it is siad that death pays all debts. He can be taxed no more. No further burden can be placed on him. If, however, he had got insured to pay such a tax, he certainly bore it when he paid the insurance premia. In the absence of any such anticipation by the owner of the property, when he was alive, the tax will obviously fall on the beneficiary, because he inherits so much less of the property. He is poorer by the tax levied on the property of the deceased.

Which is better from the point of view of the tax-payer—heavy annual income tax or death duty ? It all depends on the rate at which he discounts his liability to death duties. Since the present owner has not to surrender either his income or his capital, he discounts his death duty liability at a pretty high rate. Death duties means, therefore, less sacrifice on his part. Hence the government can raise more revenue by imposing death duties than by levying income-tax with a smaller loss of satisfaction to the tax-payer.

As for the economic effects of death duties, they are similar to those of annual income tax rather than to those of once-for-all levy. No doubt the death duty is paid out of an estate or capital, but any property which may have to be sold to discharge this liability can be easily purchased out of the normal annual savings of the community. Hence death duties may be considered to be paid out of income rather than out of capital.

Death duty brings about greater equality in the distribution of wealth in the community. and is thus in conformity with the ideals of social justice. It also promotes stability in consumption.

It is commonly said that death duties hamper small firms in raising capital for expansion. For this, however, death duties are not wholly to blame. In modern times, a small firm does not command much credit in the capital market. The super tax also reduces private funds available for investment. Death duties may, however, adversely affect agricultural capital. The market for real estate is admittedly limited, and hence when it has to be sold to meet liability arising out of death duties much loss may occur in its capital value.

13. Incidence of Taxes on Income. Income tax, super tax, excess profits tax are all direct taxes and are as such borne by the people who pay them in the first instance. They cannot ordinarily be shifted. But a business man, who is in an exceptionally strong position relative to the persons he deals with, may be able to shift a part of the tax to his customers. May be that he is the seller of a very popular brand; may be that he is a very popular doctor in whom his patients have implicit faith. In such cases, the customers may be willing to pay a bit more. But these conditions are rarely present, and the income-tax payers must ordinarily bear the burden of the tax. In the short run, it is definite that the tax on the business man has no influence on price which is determined by demand and supply. Profit depends on price, and not *vice versa*. A tax on profit, therefore, cannot be passed on to the consumer by raising the price. In the long run, however, a heavy tax may check enterprise by reducing the anticipated profits. But it will depend on elasticity of supply and alternative channels of investment available. It is very difficult to say what will happen in the long run. The probability is that a moderate tax will not have any undesirable repercussions.

If, however, the income-tax is extremely heavy, it may discourage saving, check accumulation of capital or drive it abroad. The productive capacity of the community will be impaired and there will be widespread repercussions of such a heavy tax. But the tax is seldom so heavy. Ordinarily, therefore, it rests on those on whom it is imposed.

A heavy income-tax may discourage incentive and enterprise. This, however, will depend on whether the tax falls on average income or marginal income. In the former case, the tax-payer is transferred to a lower income group and he must work harder to maintain his customary standard of living. If the increase in tax falls mainly on the marginal income, it will mean a positive discouragement to the earning of that income. How far actually the enterprise will be affected will depend on the tax-payer's ability to vary his income and hence his liability to be taxed, by varying his effort. Ordinarily few workers have the ability to vary their income by varying their effort; only when there is a great demand for overtime they may be able to do so.

14. Tax on Interest. Interest, as a source of income, is generally taxed under income-tax. But a separate tax may be imposed on income from interest. Such a tax will ordinarily be borne by the capitalist especially if the supply of capital is very large and the demand for capital is less. But in case the demand is more urgent and the supply of capital is meagre, as is the case in the rural parts of India, the tax on interest will be shifted to the borrower. Much depends on the degree of mobility of capital. If capital can be moved into some other channels of investment, the supply of capital for lending purposes will contract which will lead to the raising of the interest rates. This means that the incidence will be on the borrower. Actually, however, capital is seldom so mobile and a part of the tax at least will be borne by the owners of capital. In case the tax is very heavy, it will discourage the accumulation of capital to the detriment of trade and industry in the country. In that case, the incidence will be more widely spread among the consuming public.

15. Tax on Profits. The problem of incidence of a tax on profits is complicated by the fact that there is difference of opinion among the economists about the definition of profits and the elements that compose it. Some economists, like Prof. Walker, regard profits as analogous to rent. In this sense, profit is a surplus earned by the entrepreneur superior to the marginal entrepreneur. The price in the market is determined by the marginal producer. Hence profit, like rent, also does not enter into price. It cannot, therefore, be shifted to the consumer. It will be borne by the business man who pays it. But we do not subscribe to this theory. Even the marginal entrepreneur must have profit in the long run. Normal profit is, therefore, not a surplus but a part of the necessary cost. This, however, does not lead us to the conclusion that a tax on profit will be shifted to the consumer unless the entrepreneur is able to influence the price which he rarely can. For an individual entrepreneur price in the market is fixed. This being so a tax on his profits must come out of his own pocket. A general tax on profits, as a rule, is not shifted unless the prices are rising rapidly and the consumers are anxious to buy. This, however, is very rare.

But if the tax is a special one on profits from a particular trade and industry, there will be a tendency of the entrepreneurs to withdraw themselves from such lines. If this happens, the incidence will ultimately be shifted to the consumers of the commodity or the users of the service supplied by these entreprenours. A great deal depends upon the elasticity of demand and the mobility of capital.

A tax on profits may take the form of a licence duty. Even in this case it will be borne by the producer. In order to reimburse himself, the producer may increase his output. The consumer benefits but the incidence of licence duty will remain on the producer. It is generally too small to make the producer try to shift it.

Although complete exemption of profits is not desirable, yet a high tax is highly undesirable. It will put a brake on invention and enterprise and it will cut down revenues and thus hinder modernisation of plant. In the words of Mrs Hicks, " The effect of an additional tax on profits on a curve of expected returns is to shift the curve bodily to the left, but without altering its shape or the chance of loss. The chance of very high gains which formerly balanced the big chance of loss in the risky investments curve is thus cut off, and the scales are consequently tipped against it ; while the safe investment, being relatively unaffected, will become the more attractive. The discrimination of high profits tax against 'venture capital' is serious for any country that means to keep abreast of modern development ; it is perhaps especially serious in an established industrial country, well supplied with most sorts of industrial equipment, and where, consequently new enterprise needs to be especially on the alert. This tax has also important cyclical relevance : in depression, curves of expected returns flatten out ; many normally safe investments pass into the risky class."[1]

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[1] Mrs. U. K. Hicks—*op. cit.*, 1948, pp. 224-25.

16. Excess Profits Tax. It should be clearly understood that a tax on excess profits does not mean a tax on "excessive" profits, *i.e.*, profits which are more than they ought to be. Who can say what the profits ought to be? If any rate of return on capital is chosen as a reasonable return beyond which all profits should be regarded as 'excess,' it will be all arbitrary. Then there will be the difficulty of defining and valuing the capital invested. Owing to technical difficulties and anomalies, to which such a tax might give rise, it should be avoided, for it will infringe the canon of equity. Since the existence of supernormal profits is an essential economic indicator of the directions in which the productive resources of the community should move, the taxation of such profits hampers the optimum allocation of resources by removing this indicator. Thus, we cannot, and we ought not, tax high profits as such on the ground that they are excessive.

But taxation of excess profits in the sense of their being higher than the pre-war profits is not only feasible but also equitable, besides being essential to cope with an emergency. Even taxation of excess profits in this sense presents some difficulties. What about the firms which came into being during the emergency itself? In this case, since the assets are new the excess can be measured on capital basis. Secondly, it may be that in businesses, subject normally to wide fluctuations, the pre-war profits may happen to be abnormally low. Some allowance will have to be made in such cases. Then there is the case of industries engaged in exploiting wasting assets; *e.g.*, mines. To meet the emergency demand, they have to work faster and more wastefully than it is economical. They must, therefore, be compensated for such losses.

It is clear that the tax authorities cannot do full justice in all sorts of cases. Hence, as compared with personal income-tax, the excess profits tax must remain a crude affair. Since the tax is high and the method of taxation is rough and ready, evasion is easy, and evasion leads to the violation of the canon of equity. Further, it is not conducive to good management; the costs are allowed to run up. Business efficiency is lowered and it may not be easy to get rid of the habit of bad management even when the emergency is over.

17. Tax on Wages. Wages are not taxed directly in modern times. But the contributions by the workers to the schemes of social insurance may be regarded as taxes on wages. If the tax is a general tax applying to all workers, the workers may not be able to shift it to the employers if the demand for labour is elastic and the supply is inelastic. It is well known that the relative bargaining strength of the wage-earners is weak. If a tax is imposed on them, it is not in their power to get an increase of wages, and, unless they can get it, the tax must be borne by them. Workers do not always emerge victorious in a labour dispute. The greater the elasticity of demand for labour, the greater will be the incidence on them of wage tax, and *vice versa.* The tax falls on the workers if it lowers their standard of living. But if it lowers efficiency the production costs will increase and the price of the product will go up. In this case, the tax will be shifted to the consumers. Workers, however, being themselves consumers, will have to bear their share of the tax even when it is so shifted.

But a tax on special types of labour may be shifted. The workers may shift to other trades or start an independent trade. There will be a greater element of elasticity in the supply of labour in this case and the demand may not be so elastic. If, therefore, the supply of labour is elastic but the demand is inelastic, the wage tax will be shifted to the employers.

18. Incidence of Social Insurance. The social insurance contributions are paid both by employers and employees. So far as employers' contribution is concerned, it adds to the wages bill. This leads to more or less proportional rise in prices. But as the insurance funds are distributed among the workers, there is a rise in incomes along with a rise in prices, so that real incomes and employment remain unaffected. But although the internal situation is not affected, the external situation is. A rise in domestic prices tends to discourage exports, whereas a rise in the workers' incomes due to insurance benefits may stimulate imports with the result that the balance of payments position is weakened.

Turning to the employees' contribution, we might say that the incidence is on consumption rather than on saving. Since the contributions are uniform, they are regressive and fall more heavily on the unskilled workers who are able to save less. When the whole community comes to be covered by the insurance scheme, the incidence of insurance contributions will be similar to that of income-tax.

19. Taxation of Surplus. There is a certain minimum remuneration which must be assured to a factor of production if its supply is to be maintained. There is a minimum wage, a minimum rate of interest and a reasonable and normal rate of profit which the respective agents must get. Their incomes constitute the necessary costs. These necessary costs cannot be taxed. If a tax is imposed on them it will be shifted. For example, if a tax cuts down the normal profit, it will discourage enterprise; productive activity will be curtailed and the tax shifted to the workers or consumers. If the minimum wage is taxed, it will either lower efficiency or reduce the supply of labour. This will mean shifting of the tax either on the consumer or the employer. The taxing of the necessary costs will threaten the withdrawal of the factors concerned. Thus it is said that all taxes have a tendency to be shifted to a surplus, *i.e.*, an income over and above the minimum necessary to ensure the regular supply of a factor. If it is the monopolist who is enjoying a surplus, he will bear the tax himself. If surplus arises from the manufacture of a necessary of life, then the demand being inelastic, the tax will be wholly shifted to the consumers. If the commodity is a luxury, the incidence will be borne partly by the producer, partly by the middleman and partly by the consumer.

20. Incidence of Sales Tax. The tax is levied on the turnover, profits or no profits. Its incidence is a complicated affair, because it covers commodities of widely divergent nature. If the demand for a commodity is inelastic, its price can be raised and the tax will be then shifted to the consumer to that extent. But if the demand is elastic, it may be shifted partly to the consumer and may remain partly on the seller. The sales tax may make heavy inroads into profits which may lead to retrenchment in staff and management, restrict enterprise, leaving some business premises unoccupied. Thus its incidence may fall upon the employees, management and landlords. Sales tax indeed hits a large number of people of different types.

21. Profession Tax or Haisiyat Tax. It is a tax on profession or employment. Its incidence is like the incidence of income tax. It lies where it is levied and cannot be shifted if it is a general tax. In case it is a tax on certain professions and is heavy, then it may discourage entry into those professions. Those who use the services of such people will then have to pay more and bear the incidence.

22. Tax Differentiation. Whenever a tax is imposed, it is bound to affect some people, some favourably and others adversely. It may favour persons living at a certain place and penalise those living at another. It may favour some businessmen at the expense of others. In other words, taxes differentiate in favour of some and against others. This is tax differentiation. In Benham's words, "Taxes alter the objective inducement to do something rather than other : they differentiate against certain activities."

A few examples will make it clear. Income-tax which grants a relief on earned incomes differentiates in favour of personal exertion and against mere investment income. A succession duty again has a similar effect. It favours those who create property themselves as against those who merely get by inheritance. Heavy local taxation in Bombay drove the cotton textile industry to Ahmedabad, Sholapur and Hyderabad. A poll tax differentiates against the inhabitants of a certain country. A tax on certain professions differentiates in favour of persons engaged in the non-taxed professions and penalises those who follow the taxed professions. A tax on tea will differentiate in favour of coffee. Examples can be multiplied. The meaning of differentiation is very clear. It means the tracing of the effects of taxes to see what adverse effects it is likely to have or whether it unduly favours some sections of society.

Government has to use Public Finance as an instrument of social justice. For that purpose it has to favour some classes at the expense of others. Again, it has to encourage certain industries or develop them in certain areas. For all these purposes, a study of tax differentiation is very useful.

CHAPTER XLVII

PUBLIC DEBT

1. Introduction. Borrowing by public authority is of recent growth. It was not known till the eighteenth century. Whenever there was an emergency, usually a war, the monarch relied on his hoarded wealth or borrowed on his own personal credit. Books on history abound in instances of fabulous hoards and accounts of loots and sacks of hoarded wealth either from King's treasuries or from temples and churches. But this method of finance is not suited to modern conditions. It will be inadequate and uneconomical. In the nineteenth century, public credit replaced private credit. An average citizen today has a greater sense of security and confidence, and his willingness and ability to lend have increased. These constitute a solid foundation of a system of public credit.

The system of public credit, making it easy for the States to borrow, has led to tremendous increase in the indebtedness of modern States. The public debt of 27 countries in 1900 was £6,079,000,000; in 1913 it increased to £8,566,000,000; and in1933 to £22,000,000,000. Almost the sole responsibility for this phenomenal increase lies on war. The net cost of the war of 1914-18 was estimated at £42,000,000,000.[1] The war of 1939-45 has been infinitely more costly.

Besides war, there are several other reasons which have brought about great increase in the size of public debt. It is due in the first place to fairly frequent budget deficits on current account. These deficits arise from the necessity of maintaining full economic activity in the economies which have ceased to expand. Increase in public debt is also due to long-term industrial investment and the undertaking of welfare schemes. Thirdly, in public utilities, where there is no convenient profit check, no tight control over costs can be maintained and there are more losses than gains. They also add to the weight of public debt.

2. The Benefits and the Dangers of Public Credit. Public borrowing has led to increased production, increased national wealth and consequently the raising of the standard of living. But for public credit huge public works like roads, railways and canals would have been simply out of the question. Public credit is sometimes the only means of restoring a country to its normal conditions when it has been attacked by natural calamities like floods, earthquakes, etc. It is beyond the ordinary revenue strength of the nation to cope with the damage and destruction wrought by such calamities.

A modern war can never be fought without having resort to public borrowing. A nation which comes to the end of its' financial tether earlier is bound to go under. Public credit thus safeguards the very existence and the liberty of a nation. It is through public borrowing that backward countries with vast natural resources are enabled to develop their potential natural wealth. Safe and remunerative channels of investment are opened out for the citizens of the lending country. International lending has a favourable reaction on balance of trade and steadying influence on foreign exchange.

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[1] Findlay Shirras—*Science of Public Finance*, 1936, p. 779.

Finally, a system of international loans has many non-economic advantages. The lending countries become interested in the material advancement of the debtor country. It broadens the outlook of its citizens. The mutual intercourse between the nationals of different countries leads to mutual understanding, and as such may go a long way in preserving international peace.

But public credit has not proved to be an unmixed blessing. It has its dangers too. The most obvious danger of public borrowing arises from the dangerous facility, with which governments can borrow. It may lead to over-borrowing, *i.e.*, beyond its capacity to pay. Reckless borrowing, especially by young and undeveloped countries, has led to extravagance. Expensive schemes are launched without carefully calculating their probable yield and with no reference to the country's capacity to bear the burden of such schemes. This saddles posterity with interest payments without corresponding return.

Many countries have lost their political independence owing to excessive borrowing. Egypt was one such country. The revenues of the country have sometimes to be mortgaged to the foreign bondholder. Foreign governments generally come to exercise political domination. Foreign loans lead to a constant drain of wealth out of the country. If the money has been borrowed for unproductive purposes, the interest payments represent a dead weight which posterity has to carry. Public borrowing leads to international complications and instead of promoting peace, it may endanger peace. Vested interests are created. Public loans can well be a source of constant friction between the lending and the borrowing nations.

On the whole, however, the advantages of public credit far outweigh its disadvantages. The brighter side, so to say, is much more prominent than the darker side. It has often conferred numerous and lasting benefits on those concerned, the lenders and borrowers.

3. **Funds for Emergencies**. The following methods are known to governments for raising funds when an emergency arises :—

(*i*) The utilisation of hoarded weath.

(*ii*) The sale of government property.

(*iii*) The imposition of new taxes and raising of the rates of old taxes.

(*iv*) The floatation of temporary loans.

(*v*) The floatation of permanent loans.

(*vi*) The issue of inconvertible paper money.

Few modern governments have any hoarded wealth. Jewellery and other hoarded wealth is the personal property of the rulers.

As for the second source, *viz.*, the sale of public property, it is not an important source in old countries where public lands are supposed to have been disposed of long ago. A modern government would like to acquire more property rather than sell off that which it already

Whenever an emergency, like a war, arises, the first means of raising public funds is to raise the rates of some of the old taxes, like the income-tax, excise duties, railways and postal rates, etc. In addition, some new taxes are also imposed. New duties may be levied and the tariff list may be enlarged. But there is a limit beyond which it is not safe for a government to proceed in the direction of taxation without courting unpopularity. There is a point beyond which people are unable to pay taxes or unwilling to tax themselves. If taxation is excessive, it may impair the productive capacity of the nation besides over-straining the loyalty of its citizens. The governments, therefore, follow the line of least resistance and do not overwork their tax system. Instead, they resort to borrowing.

4. Temporary *vs.* **Permanent Loans.** The loans raised by the States may be temporary or permanent.

Temporary Loans are usually raised by the sale of Treasury Bills or by Ways and Means Advances from the Central Bank. As a rule they are raised internally. The following are some of the considerations which either favour or necessitate *short-term* borrowing :—

(*a*) When the prevailing rate of interest in the money market is abnormally high, it will be unwise for the government to saddle itself with heavy interest payments for a long time. It will be prudent in such cases to raise a temporary loan till the rates come down and the time for a permanent loan is more opportune.

(*b*) When the government has to tide over a temporary difficulty, it will be unnecessary to raise a permanent loan, *e.g.*, covering a budgetary deficit or simply bridging the gap between immediate expenditure and expected income ; the new tax revenue may not start flowing in till June or July and there may be a temporary shortage of funds in April and May. Temporary borrowing is the only proper course in such a case. If the purpose is temporary, the loan need not be permanent.

(*c*) Temporary borrowing has the merit of enabling the government to carry on its activities unhampered and avoid the inconvenience of raising a permanent loan.

(*d*) The issue of temporary loans is welcome to the money market. Treasury Bills are the safest and the most profitable investment for the banks. They constitute an ideal investment for their surplus funds.

But as against this, *temporary loans have some drawbacks* :—

(*a*) When a government enters the money market for raising temporary loans, the funds of the banks are diverted from trade and industry, which are consequently starved. Even the bank deposits decline. Competition from the government in the money market beyond a limit may have very adverse economic effects.

(*b*) Existence of a large floating debt may prove to be a source of embarrassment to the government. It may shake public confidence in the financial stability of the State and may produce unhealthy repercussions. When a big temporary loan matures, the government finances may be subjected to a severe and unbearable strain.

(*c*) It is generally seen that when one temporary loan matures another is issued to repay the first. Temporary loans, therefore, in fact become permanent loans. The funds of the money market are indefinitely locked up to the detriment of commerce and industry.

(*d*) The existence of a large floating debt has dangerous potentialities for the future when a real emergency arises. For example, when war breaks out the government will at once need large funds. But if it is already indebted and has raised loans to the very hilt, the prospects of raising new funds will be gloomy indeed.

(*e*) Another danger inherent in short-term borrowing is that it generally leads to inflation. When the loan matures, the government may just print notes to repay the debt. The dangers of inflation are only too well known to the present generation in India. We shall discuss these dangers presently.

(*f*) There is no legislative control over temporary borrowing and there is not much publicity. It is done by purely executive action. The danger of over-borrowing, therefore, is a real danger. Over-borrowing may lead to extravagance.

Permanent borrowing has merits and demerits of its own. In favour of a permanent loan, we can indicate the following :—

(*a*) It is profitable when prevailing interest rates are low. Such conditions are really favourable for the launching of some public works programme, for the capital charges will be low.

(*b*) A long-period loan does not embarrass the government. Timely arrangements can be made for its repayment.

(*c*) Government bonds are a very good investment. They provide a remunerative outlet for trust funds, funds of the banks and of insurance companies. There is no doubt that saving is stimulated and the nation is enabled to accumulate large capital.

(*d*) It also satisfies our sense of equity. The future generation, which is to benefit by public works like irrigation and railways, or from the spoils of war, may be made to bear its due burden. This can only be done if these ventures are financed by means of long-term loans.

(*e*) Long-term loans are a great necessity for the prosecution of a modern war or for repairing destruction wrought by it. The restoration of the ruined areas to their normal condition must require funds too large to be raised by taxes. Such a huge burden cannot be placed on the finances of a few years. It must be spread over a long period to make it bearable. This can only be done by resorting to a long-term loan.

(*f*) Loans for productive purposes create national wealth out of which both the principal and the interest can be met. The sources of wealth created with the help of long-term loans, *e.g.*, canals and railways, remain as permanent asset and augment national wealth in the future. Long-term loans are thus very profitable.

(*g*) Finally, long-term loans give the citizens a permanent interest in the State. They arouse civic consciousness and nurture the sentiment of patriotism, for a very intimate relation is established between the citizen and the State through public borrowing.

Long-term or permanent borrowing is, however, not free from objections, which are as under :—

(*a*) It is undesirable to raise a long-term loan when the rates of interest are ruling high. To issue a long-term loan at such a time will certainly be objectionable from the public point of view.

(*b*) It is also not quite fair that we make posterity suffer for our own mistakes. Why should the future generation of Germany be punished for the blunders that Hitler committed ? In the same manner, through miscalculations a big public works programme may miscarry and posterity may be saddled with a losing concern.

(*c*) As compared with taxes, it is so easy for the government to get money by raising loans. But the government can further an unpopular cause or prosecute a doubtful venture by loans. This is a dangerous weapon in the hands of the government, and it has an undemocratic flavour. Wars would come to an end, if they came to be financed by taxes alone.

(*d*) A large public debt acts as a drag on trade and industry. Large interest payments necessitate heavier taxation. Excessive taxation will hamper economic progress. Industry will be subjected to a great strain.

In spite of these objections, there seems to be no escape from borrowing. Every government borrows and must borrow. Political exigencies are such.

Long-dated loans can be internal or external, *i.e.*, they may be raised from the inhabitants of the country or from a foreign government. In the case of an external loan, the interest payment means a regular drain of wealth out of the country. It may have very undesirable consequences, *e.g.*, loss of political independence. Upon posterity it means a real burden if the loan was taken not for productive purposes but for prosecuting a war.

5. Limit to National Borrowing. Debts after all have to be repaid. A State, therefore, cannot borrow without any regard for its paying capacity. The State can borrow in different forms, and in each case there is a limit beyond which it cannot go consistent with its own safety. Let us consider the various forms of borrowing and the limit in each case.

(*a*) *Issue of Paper Money.* It is called a forced loan. Now it is admitted that inflation is a very dangerous weapon ; we are soon caught in a spiral of rising prices. If carried to an excessive limit, the paper money will become worthless and the entire economic life of the country will be paralysed. This is what happened in Germany in the war of 1914-18.

(*b*) ***External Loan.*** In this case, borrowing depends on financial stability and credit of the country. Few countries have unlimited national credit. The budget of each country can give some idea beyond which no nation can expect to borrow from abroad. The foreign governments will be guided by the tax-bearing capacity of the citizens of the borrowing State and the *per capita* income of its people. No foreign government will lend without a limit.

(*c*) *Internal Borrowing.* Here again, there is a limit beyond which borrowing is not possible. The maximum limit is indicated by the physical saving possible. Theoretically it may be said that the government can borrow all what the people can save. Actually this would seldom happen unless, of course, the State is passing through a life-and-death struggle. If the government borrows all that the people save, nothing will be left for financing trade and industry. A continuous flow of new capital is needed not merely to maintain the existing capital intact but also to create new capital. It is essential to run the industry not merely efficiently but also progressively. If the government stops this flow of capital or reduces it to a mere trickle, trade and industry will undoubtedly be hampered. We can, therefore, say that normally a state can borrow only the surplus funds, *i.e.*, funds over and above those normally required by trade and industry.

We thus come to the conclusion that whether a State borrows from abroad or at home or merely issues paper money, in each case there is a limit. This limit cannot be crossed either without endangering the safety of the State or without impairing the productive capacity of the nation.

6. Public Funds Through Note-issue. A modern war has become so costly that it had become impossible for a country to wage it without having resort to the printing press. Loans and taxes do not prove adequate for the purpose. In the later stages of the war of 1914-18, Germany almost exclusively relied on this source and it proved her undoing. In the second World War again, all belligerent countries had more or less to tap this source. Even in England and America there was a considerable increase in note-issue. In India, it had assumed dangerous dimensions and evoked spirited protests from eminent Indian economists. On September 1, 1939, there were Rs. 182 crores worth of currency notes in active circulation in India. But on October 19, 1945, the figure stood at Rs. 1,160 crores. This is more than six times increase.

Thus note-issue as a means of raising funds for emergencies has come to occupy a definite place in public finance. But it is admittedly the worst means and one that is fraught with grave dangers. This is not the place to discuss the adverse economic effects of the over-issue of paper currency. But we may emphasize that inflation or over-issue of notes has got an unsettling effect on internal trade ; it disturbs international trade by upsetting foreign exchanges. It engenders speculation and imparts an element of uncertainty into business relations. Thus it cuts at the very root of healthy trading which is based on the possibility of making reasonable forecasts. In the words of Dalton, "Doped by artificial prosperity, they (business men) become first light-hearted and then light-headed, miscalculate prospects, misdirect resources, and launch enterprises which are economically unsound. The mere cessation, sometimes even mere slackening in the rate of inflation, is enough without any positive deflation, to break the illusion, to destroy business confidence, to disappoint anticipation of demand, and to put out of action, sometimes for considerable periods, a large part of the productive power which these business men control.''

The steep rise in prices which follows in the wake of over expansion of currency causes incalculable hardship to the masses. It hits hardest the poor consumer, the fixed-incomist and the wage earner. The debtor-creditor relations are also upset. The net result of inflation is to bring undue gains to some and undeserved losses to many. ''It is a paradise for speculators and profiteers who are enriched through no effort of their own, partly at the expense of wage-earners (prices go up by the lift but wages by the stairs) but still more at the expense of those with fixed incomes.''[1]

The people's confidence in the stability of the State is rudely shaken. There is flight from currency. The government is caught in a vicious circle to come out of which is no easy task. Every extra issue of notes raises prices ; the government must find more money, therefore, to make its purchases. This leads to a further issue of notes, and so on. It is a very slippery road, and a government inflating its currency is heading for an economic and political disaster.

Apart from these dangerous reactions of inflation, the financial *pundits* have denounced it violently as being opposed to sound canons of finance. It has been called a forced loan and also free of interest. The government, by issuing notes, equips itself with purchasing power at the same time diminishing the purchasing power of the people. If I have a 100-rupee note and the government doubles the note-issue, the prices, according to the quantity theory of money, will double and my 100-rupee note will be able to buy goods worth Rs. 50 only. It simply comes to this that the people are forced to place at the disposal of the government goods and services which they could have purchased, and this without their knowing it. It is not only a forced loan but a concealed loan. Prof. C.N. Vakil calls it robbery.

The most fundamental objection to this mode of raising money is that it violates the canon of equity or equality. When prices rise, both rich and poor pay high prices, and they all buy at the same price. If the price of sugar rises from 50 nP. to Re. 1 per seer, the poor pay double the price along with the rich. But the rich can afford, while the poor cannot. Inflation may be compared to proportional taxation. It pays little heed to capacity to bear. In its effects, therefore, it is regressive. The poorer sections of the community are compelled to make a larger contribution to State finances and they are the people who can ill afford to do so. This is sheer injustice. Wealth is redistributed in favour of the already rich.

Thus inflation is politically dangerous, economically disastrous and morally indefensible. Had it not been for the dire need which States sometimes find themselves in this method of raising funds perhaps would never be resorted to. It accentuates inequalities of wealth distribution ; it paralyses the machinery of wealth production, and, even as a source of revenue, it soon gets dried up.

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[1] Thomas S.E.—*Elements of Economics*, 1936, p. 671.

7. Debt Redemption or Repayment. Modern governments make it a point of honour to repay their debts. Debt repayment maintains and strengthens the national credit. If a national emergency arises later, it will be easy to raise funds. Repayment of loans also releases funds for trade and industry.

The following are some of the methods adopted :—

(1) *The utilization of surplus revenue.* This is an old method and badly out of tune with the modern conditions. Budget surplus is not a common phenomenon. Even when there is a surplus, it is so insignificant that it cannot be used for making any substantial reduction in the public debt.

(2) *Purchase of Government Bonds.* The government may buy its own stock in the market thus wiping off its obligation to that extent. This may be done by the application of surplus revenues or by borrowing at low rates, if the conditions are favourable.

(3) *Terminable Annuities.* When it is intended completely to wipe off a permanent debt, it may be arranged to pay the creditors a certain fixed amount for a number of years. These annual payments are called annuities. It will appear that, during the time these annuities are being paid, there will be much greater strain on the government finances than when only interest has to be paid.

(4) *Conversion.* This is a method for reducing the burden of the debt. A government may have borrowed when the rate of interest was high. Now, if the rate of interest falls, it can convert a high-rated loan into a low-rated one. The government gives notice to the creditors that they should either agree to reduce the interest rate for future payments or it will exercise the option of repaying the loan. In case the bond holders do not accept the lower rate, then the government will raise a new loan at lower rate of interest and, with the proceeds, pay off the old debt. The effect is to convert a high-rated loan into a low-rated one. The financial burden is consequently reduced.

(5) *Sinking Fund.* This is the most important method. A fund is created for the repayment of every loan by setting aside a certain amount every year out of the current revenue. The sum to be set aside is so calculated that over a certain period, the total sum accumulated, together with the interest thereon, is enough to pay off the loan.

Apart from these normal methods of debt reduction, some unorthodox or revolutionary proposals have also been put forward. They include :—

(*a*) *Debt Repudiation.* A government may refuse to recognise obligations incurred by a former government. Unless a government comes into power by a revolution, such a revolutionary proposal will not be seriously put forward by any sane politician. It is usual for governments to honour the commitments of the predecessors.

(*b*) *Compulsory Reduction of Interest.* This looks less offensive, especially if the conditions have so changed as to make the high rates too onerous. But it does not look nice for a civilised government to violate the sanctity of contract.

(*c*) *Steep Taxation of Higher Income.* We have already said that excessive taxation may have very adverse effects on trade and industry. It may dry up savings, a source of new capital. Industrial plants have to be renovated and reconditioned. Timely repairs and replacements are essential if it is to be kept in proper trim. Unless this is done, progress of industry is sure to be hampered. It is very necessary, therefore, in the interest of the business prosperity of the community, that no financial measures should be taken which are calculated to check the flow of capital and business ability. Already the level of taxation has reached a high pitch. To make it still more steep will be to encroach upon the supply of capital essential for the maintenance and progress of trade and industry.

(*d*) Finally, there is the capital levy. Due to its importance, we devote a separate section to its discussion.

8. Capital Levy. The advocates of capital levy propose that there should be a special debt redemption levy, called capital levy, for the purpose of reducing war debt. A law would be passed by which "every man and woman of a suitable degree of wealth would be deemed to die and to come to life again next morning as the fortunate heir to his or her own property on payment of an appropriate ransom." Such a proposal found much favour just when the First World War (1914-18) was over. The psychological conditions favourable to the levy were present then. But as the war receded, the enthusiasm of the advocates of this proposal was considerably damped. Administratively the levy is quite practicable but it cannot be carried through without general assent. The Colwyn Committee on National Debt and Taxation appointed in 1923 came to the conclusion that "even if there were a prospect of a capital levy being well received the relief from debt which it offers would be insufficient to justify an experiment so large, difficult, and full of hazard."[1]

Several arguments have been advanced against the proposal of a capital levy.

In the first place, it is pointed out that it will damage both capital and credit. Trade and industry must inevitably suffer. This sort of confiscation is bound to shake public confidence and check the flow of capital into industry.

In the second place, it proposes to penalise the thrifty. Those who have been extravagant cannot be touched by the State. They go scot-free. The shadow of the levy must frighten away capital and discourage saving. "It would be a case of burning your house to roast your pig."

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[1] Quoted by Findlay Shirras—*Science of Public Finance*, 1936, p. 866.

Thirdly, the capital levy is bound to depress trade, bring down prices and wages, and cripple the borrowing powers of the business community.

Fourthly, the threat of capital levy may lead to capital consumption and thus impair the productive capacity of the community. The community's provision for the future will deteriorate as compared with its provision for the present.

Finally, there are bound to be administrative difficulties involved in a measure of such a nature.

Capital levy is justified on the following grounds :—(*a*) By relieving the exchequer of the heavy burden of the debt charges, funds would be released for social services. The conditions of the masses can be vastly improved. This is not now possible, for a big slice of the tax revenue is eaten up by the bond-holder.

(*b*) It would equalise the sacrifices made in war by the rich and the poor. During war, the rich remain at home, whereas the poor join the army and suffer untold privations on the front.

(*c*) It would be in conformity with the canon of equity. Those who are able to pay will be made to pay. The owner of capital enjoys some economic advantage, *e.g.*, of security and opportunity over and above the income that he gets. This "capitalist's surplus" is a fit target of attack by the tax authorities.

(*d*) It is much better to cut short the agony and pay off the debt at one stroke rather than go on paying for 200 years.

(*e*) A capital levy is no more unjust than high taxation. Both belong to the same category. Both can be condemned as immoral and confiscatory. There is nothing particularly immoral in the levy. Morality is only a relative term.

(*f*) It will mitigate inequalities of wealth distribution.

(*g*) Too high an income-tax may discourage incentive and enterprise and put a premium on evasion. But a capital levy is free from such defects, since it is related to the past action and not to the present effort.

(*h*) Capital levy is advocated to combat war-time inflation, since it is deflationary in its effect. This is so because it necessitates wholesale capital transfers so that the levy-payers may have liquid funds to pay the levy. Actually, however, it may have the opposite effect, because usually loan facilities are provided to enable them to discharge their levy liability. This new borrowing has an inflationary effect.

In the face of such conflicting arguments, it is not easy to give a verdict. Opinion is bound to remain divided on an issue like this. Our own opinion is that a capital levy is beyond the sphere of practical finance ; there are really no short cuts to debt redemption.

Really there are two main arguments in support of the levy: (1) The capital value of the debt is too high ; and (2) the annual cost of the debt is also too high. Now it is not necessarily desirable that the size of the public debt should be reduced. Repayment of national debt must take due notice of the economic and financial conditions of the country. A large-scale destruction of private property, which a capital levy involves, is bound to cause a big disturbance to business programmes and capital market. The case for reduction of annual debt charges, however, stands on more substantial grounds. But this will depend on the structure of the capital levy, *i.e.*, the height of the exemption limit and the steepness of its progression. The rate of interest on debt, the extent to which it is tax free, the amount of the debt, etc., must also be taken into consideration. In few countries will conditions be found favourable for the levy. We may conclude in Mrs. Hicks' words : "A levy thus amounts to a major surgical operation on the body politic ; it will be either a kill or cure, and very different in its effects from the regular dosage or massage applied by the normal tax structure."[1]

9. Burden of Public Debt. In order to assess the burden of public debt, we shall have to consider the nature and the purpose of the public debt. If the debt is taken for productive purposes, *e.g.*, for irrigation and railways, it will not mean any burden. On the other hand, it will confer a benefit, provided the scheme has been successfully executed. But if the debt is unproductive, it will impose both money burden and real burden on the community. The measure of the burden will depend on whether the debt is internal or external.

Internal Debt. This internal debt involves a series of transfers of wealth within the community. For example, when the loan is raised, money is transferred from the lenders to the government. The government then makes payments to contractors, government servants or to those people from whom it buys goods and services. Money is thus transferred from some sections of the community to the other sections. In this case, there is obviously no direct *money burden* of the debt.

But there will be a direct *real burden* (*i.e.*, sacrifice, hardship or loss of economic welfare) on the community depending on the nature of these transfers of wealth. If by these transfers, wealth comes to be more evenly distributed, *i.e.*, wealth is transferred from the rich to the poor, then public debt will be considered beneficial instead of being burdensome. If, on the other hand, the public debt enriches the rich at the expense of the poor, it imposes a real burden.

Let us analyse carefully the nature of the transfer. In order to repay the interest and the principal of the debt, the government must levy taxes. What the tax-payers pay, the bond-holders receive. The bond-holders are generally rich people. But the tax burden does not exclusively fall on the rich unless it is very sharply progressive which is seldom the case. The tax burden falls on the rich and the poor both, and, in the case of indirect taxes, it may be more on the poor than on the rich. The net result may be that the wealth is transferred from the poor to the rich. This means a net loss of economic welfare.

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[1] *Public Finance*, 1948, p. 238.

This burden is accentuated by the fact that the transfer is from the young to the old (the bond-holders, the creditors of the government, are generally advanced in age) and from the active to the passive members of the community. "Here," says Dr. Dalton, "if nowhere else in the sphere of public finance, the voice of equity rings loud and clear. There is also a general presumption, on grounds of production (besides those on grounds of distribution) against the enrichment of the passive at the expense of the active, whereby work and productive risk-taking are penalised for the benefit of accumulated wealth."[1] Thus internal debt has adverse repercussions both on production and distribution of wealth. This is its *direct real burden.*

Its *indirect real burden* will lie in the check it imposes on production. The production is likely to be checked if the desire and ability to work and save are reduced. If the repayment of debt involves very heavy taxation, it is likely to reduce the ability and the willingness to work and to save.

Burden of External Debt. The external debt also involves a series of transfers of wealth but not within the same country like the internal debt. This makes all the difference. When the loan is raised, wealth is transferred from the lending to the borrowing country, and when it is repaid the transfer is in the opposite direction. The amount of money paid by the debtor-country towards interest and the principal is the measure of the *direct money burden* on the community. But if we want to know the direct real burden (*i.e.*, loss of economic welfare), we shall have to consider the proportions in which the rich and the poor contribute to these payments. The government will raise the required money by taxes. If the taxes fall largely on the rich, the direct real burden will be less than it would be if the incidence is largely on the poor. The payment that we make to the foreign creditor gives him a control over our goods and services. He does not take away our money ; it is of no use to him. He buys with that money goods in our country. An external loan thus sets up a drain of goods from our country. In the absence of debt payments, these goods would have been enjoyed by ourselves. This means a diminution of economic welfare ; hence a *direct real burden.*

The indirect burden of the foreign debt lies in the check to production of wealth in the country. Taxes imposed in order to raise funds for debt payment may reduce willingness and ability to work and to save. The debt payment made by the government will reduce public expenditure in the directions which would have stimulated production. Hence production may be checked.

International payments can be made only by exporting goods. For this purpose a country must produce more. Hence it is said that production is stimulated. But production is stimulated only in certain directions. There is no general increase in production and employment. Factors of production are limited. If they are needed in the export industries, they will have to be withdrawn from the other industries which must consequently shrink. Thus there is only a diversion of resources and no net increase in production and employment.

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[1] Dalton—*Principles of Public Finance*, 1943, p. 244.

10. War Finance.[1] How should war be financed ? No dogmatic and straight anwser can be given to such a question. Much depends on the total cost of the war, the duration of the war, the conditions in the money market, and above all the psychological and political conditions. A course dictated under one set of conditions may have to be deviated from under another.

We may refer here to an old controversy : *Should war be financed by taxes or loans* ?

There are economists who have advocated the *all-tax method* and others who have advocated the *all-loan method.* Ricardo was an uncompromising exponent of the all-tax method. He was opposed to borrowing for war purposes, for it created a permanent deficit and made a heavy inroad into capital. The all-tax method is also advocated to bring home to the present generation what a war means, so that its bellicose propensity receives a wholesome check. "The expenses of a war," said Gladstone, "are the moral checks which it has pleased the Almighty to impose upon the ambition and the lust of conquest that are inherent in so many nations."[2]

The all-tax method is advocated on the ground that it would keep the war expenditure at the minimum level. The duration of the war, too, would be cut down to the minimum. It would rule out the possibility of inflation which is a necessary accompaniment of a modern war and which creates a host of probelms causing a severe headache in the post-war era. This method will enforce vigorous economy in private consumption and this is what ought to be. It will make war an affair of the present generation and make it rightly suffer for its own mistakes.

But as against this view, it is pointed out that no tax system can bear the tremendous strain of a modern war. Heavy taxation would reduce capital and adversely affect production. It may overstrain the loyalty of the influential upper classes. It may encourage fifth-column activities. The home front would thus crack. This the statesmen are anxious to avoid at all costs.

Loans, on the other hand, are more popular. By raising loans the government can avoid unpopularity. No odium attaches to borrowing as it does to a tax proposal. The subscriber to a loan knows that he will receive more in interest than he shall have to pay in the form of taxation as his contribution towards interest payment. He may even stint himself the necessaries of life and work very hard and earn more in order to buy war bonds. This is bound to stimulate the war-effort. Heavy taxation may impede production by encroaching on capital required by trade and industry. But the loans may stimulate production. The lenders will lend only the surplus above their own needs. Thus the industry does not suffer. The proceeds of the loan will be spent by the government in buying goods and services. This will give a fillip to trade and industry.

Thus there are two views about war finance : (1) By borrowing alone ; and (2) by taxation alone. Both these views are extreme and one-sided. The correct view is that we must use both sources, *viz.*, loans and taxes. Adam Smith said: " The want of parsimony in time of peace imposes the necessity of contracting debt in time of war." Our view is that no amount of parsimony in time of peace will be enough to finance a modern war when it comes. Borrowing is essential. Borrowing becomes essential in another way also. When war breaks out government needs funds immediately; but the tax revenue will take time to begin flowing in, and money must be borrowed to fill the gap. The right motto for the war finance is " tax to the hilt and borrow the rest."

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[1] Keynes, J. M.—*How to Pay for the War,* 1940.

[2] Quoted by Findlay Shirras—*Science of Public Finance,* 1936, p. 690

There is a third source of war finance, *viz.*, 'created money,' or issue of paper money. It is a very dangerous weapon. It is used by all belligerent nations in a modern war. But it must be used sparingly and with utmost care. We have already discussed its evils (*see* Section 6).

We thus arrive at three sources of war finance: (1) Taxation, (2) borrowing, and (3) issue of paper money.

11. The Cost of War. The cost of a war may refer to the *money cost* or the *real cost*. The money burden or the money cost of war means the total amount of war expenditure incurred. It is borne by those who contribute towards the war expenditure, *viz.*, the tax-payers (the present generation), the subscribers to the war loans (the present generation), and those who pay interest and principal (the tax-payers in the future generation). The real cost of the war, on the other hand, means terror, anxiety, privation bereavement, hatred and moral degradation. This is obviously on the present generation.

Whether the money burden of the war is on the present generation or on the future generation will depend on the method adopted to finance the war. So far as war is financed by the issue of paper money, the burden seems to rest on the present generation. The evil effects of inflation are likely to work themselves out in the course of one generation, and they are not likely to leave any seeds which may sprout in the future.

It is commonly believed that taxation places the burden of the war on the present generation and the loans on the future generation. This is not necessarily so.

There is some reason to believe that taxation hits more the present generation. The tax-payers have to curtail their present consumption. The adverse effect of heavy taxation on industry may prevent its expansion and create a serious shortage of goods. But are we so sure that the adverse effects on production will not cast their shadows on the future generation? The productive capacity of the industry may be crippled to such an extent that production in the future may diminish. Heavy taxation many not leave any reserve for the replacement and renovation of industrial equipment so that the future generation may be saddled with obsolete and inefficient plant. A check to saving and accumulation of capital in the present generation, which heavy taxation necessarily involves, is bound to affect production in the future adversely. Thus the stock argument of those who advocate the financing of war by taxes so that only the present generation may be penalised, does not contain the whole truth.

In the same manner, it is not necessary that the borrowing should shift the burden of war on the future generation. When people in the present generation subscribe to a war loan, they have to curtail their present consumption and hence suffer. The war loans, too, draw off capital from trade and industry and to the extent that the present productive capacity suffers thereby, the burden is on the present generation.

But there is no doubt that the floating of loans does render some relief to the present generation which would otherwise have to bear the brunt of heavier taxation.

In order to see to what extent the loan shifts the burden to the future generation, we shall have to consider whether the loan is a short-term one or a long-term one, and also whether it is an internal loan or an external one.

If the duration of the loan is 20-30 years, it is extinguished in the present generation; the future generation is not at all touched. Only in the case of a very long-term loan, the future generation may be supposed to bear the burden of interest payments.

In the case of an internal loan, it is very doubtful if the burden is on the future generation *as a whole*. No doubt, interest and principal will have to be paid in the future and the people will have to be taxed. The tax-payers of the future have to bear the burden. But who will receive the interest payments? The sons of the present bond-holders. It simply means that wealth is transferred from some sections in the future generation (*i.e.*, the tax-payers) to some other sections in the future generation (*i.e.*, the bond-holders). If the future generation pays, the future generation also receives. How can we say that the future generation bears the burden of a loan? It is certainly not the case, if the loan is an internal one.

But if the loan is an external one, the future generation has to bear the burden of interest payments and repayments of the principal. Wealth is transferred from the debtor country to the creditor country. There is a positive drain of wealth at the expense of posterity. This burden is light during the war and in the immediate post-war years, when business is brisk, prices are high and there is no unemployment. But when the inevitable depression comes the burden is increased manifold.

We may thus sum up: To the extent the war is financed by the issue of paper money, the burden is on the present generation. In so far as it is financed by taxation, the present generation suffers principally but the future generation also may not escape the adverse effects of heavy taxation. Similarly, though loans have a tendency to shift the burden on the future generation, the present generation may also be affected by the government borrowing. If the loan is a short-term one, the future generation is not touched. But even in the case of a long-term internal loan, posterity pays posterity, and posterity does not suffer *as a whole*. Only in the case of an external loan the burden of the war is shifted to posterity. It is only in this way that we can make posterity pay for the war that we perhaps provoked and fought.

Suggested Readings in Public Finance

Dalton, H.—*Public Finance.*

Pigou, A.C.—*Public Finance.*

U. Hicks—*Public Finance.*

Macgregor—*Public Aspects of Finance.*

Armitage Smith—*Principles and Methods of Taxation.*

Lutz, Harley Leist—*Public Finance.*

Robinson - - *Public Finance.*

Adams—*The Science of Finance.*

Silverman—*Taxation.*

Shirras — *Science of Public Finance.*

Plehn—*Introduction to Public Finance.*

Bastable—*Public Finance.*

Keynes, J.M.—*How to Pay for the War*, 1940.

De Vebi De Marco—*Principles of Public Finance.*

Alfred, G. Buehler on " Taxation and Economy " in *National Tax Journal*, June, 1950, pp. 121-33.

CHAPTER XLVIII

DEFICIT FINANCING

1. Introduction. The use of deficit financing to maintain, in the face of declines in private spending, total spending or effective demand in the economy at the level required to buy the full employment output at the current level of prices, was an important discovery of the Depression Economics of nineteen-thirties. To-day, it is a major instrument in the hands of governments in the advanced private enterprise countries to ensure continued high levels of economic activity in the face of occasional tendencies to a decline in private spending especially private gross domestic investment. Lately, the under-developed countries have increasingly realized its potentialities for adding to the resources available for development. During the First Five-Year Plan in India, for instance, deficit financing is now estimated to have met about Rs. 500 crores of development outlay. During the Second Five-Year Plan period, no less than Rs. 1,200 crores are proposed to be obtained in this way. Deficit financing is becoming, indeed, an important lever for ensuring continued high level of activity in the advanced countries and for accelerating economic development in the less developed countries.

2. What is Deficit Financing? The definition of deficit financing is likely to vary with the purpose for which such a definition is needed. For example, one may be interested in knowing how far is the government 'living within its means'. For that purpose, one may regard the excess of government expenditure over its normal receipts raised by taxes, fees and earnings of government commercial enterprises as a measure of the deficit in the government budget. In this definition, such expenditure whether financed by borrowings from the public or from the banking system measures the budget deficit. Then one's interest may be to measure the net expansionist or inflationary impact of the government budget. Expenditure by the government constitutes a claim on the resources available to the economy. Certain receipts of the government, like taxes withdraw purchasing power from the people and thus reduce their claims on resources correspondingly. It is because some receipts of the government do not reduce the purchasing power of the people at all or in an equal measure that they constitute deficit financing with an expansionist significance. In deciding the items of government receipts to be included in the deficit we have to ask whether a receipt withdraws purchasing power from the people by a corresponding amount or not. No categorical answer can be given to this question and therefore economists differ regarding the correct definition of deficit financing. Again, one may use a budget deficit to measure the contribution of the government to overall liquidity of the economy. The analysis of inflationary pressures often proceeds, despite the Keynesian revolution, in terms of the changes in money supply or the creation of near money assets. Some receipts like taxes do not create any corresponding assets in the hands of the public whereas others, like borrowing, do. Here again the extent of liquidity that attaches to an asset depends on the assumptions one makes about monetary and other policies and about the institutional framework.

From the above discussion, we learn that it is not possible to have a fool-proof definition of deficit financing applicable to all countries at all times. The definition of deficit financing adopted by the Planning Commission in India is that it is equal to the net increase in the purchasing power of the economy arising out of the budgetary operations of the government. Deficit financing is said to have been practised whenever government expenditure exceeds the receipts from the public like taxes, fees and borrowings from the public. Such an excess of government expenditure can be financed either by drawing down the cash balances of the government (held in the Reserve Bank of India or in the State treasuries) or by borrowing from the Reserve Bank of India. Both these methods of financing the deficit would have the effect of expanding money supply held by the public. Thus the Indian definition of deficit financing is that it is that part of government expenditure which is met either by drawing down the cash balances of the government or by resorting to borrowing from the Reserve Bank of India. This definition of deficit financing therefore identifies it with that part of government expenditure the finance of which leads to a net increase in money supply with the public.

3. **Deficit Financing During the Depression.** We have discussed in the chapter on Trade Cycle the causes of unemployment in advanced and developed countries. There we observed that a deficiency of effective demand was the major cause of cyclical unemployment. In a situation like this, the obvious remedy is to boost effective demand. The government can assist in this process in a number of ways. If the government does not want to interfere, it can stimulate private consumption and investment. It can do so by lowering the tax rates while maintaining its own expenditure. In this case, since the government is spending more than it raises in taxes, it is practising deficit financing, the deficit being covered by borrowing. If this method of stimulating economic activity does not produce sufficiently effective results, the government can increase its own expenditure on public works programme. The government's tax revenue remains constant but its expenditure has gone up, the deficit once again being met by borrowing. In this case, as government investment rises, the level of national income and employment also increases by multiplier times the increase in primary government investment. Thus deficit financing can be used to create additional employment when the economy is suffering from a deficiency of effective demand.

This line of approach was made fashionable by the late Lord Keynes. Before him, there was a great deal of prejudice against a government practising deficit financing. The classical economists were against deficit financing except for financing of productive enterprises. This opposition to deficit financing on their part was based on the assumption that in a private enterprise economy the level of activity had the tendency to be always full—an assumption we discussed in an earlier Chapter under Lay's Law of Markets. Obviously, if there is already full employment in the economy, a government expenditure financed by the created money is bound to create inflationary rise in prices. This fear of inflation constantly haunted the classical economists and it was their main argument against deficit financing.

Lord Keynes, however, established it conclusively that in a situation where there was large scale unemployment of labour and excess capacity in the stock of capital, the fear that deficit financing would create inflation was baseless. For when more employment was created by deficit spending on the part of the government, there would simultaneously take place an increase in the supply of output. In the depression, an increase in supply can be had without any rise in average and marginal costs of production, so that additional demand creates additional supply of output without any rise in prices. Thus in a depression, deficit financing can be safely used to expand income, output and employment without any inflationary danger. Rather, in a depression it is better to finance government expenditure by deficit financing than by increasing the rates of taxation. The latter alternative will not stimulate economic activity as much as the former for the raising of tax rates must produce some adverse effects on private consumption and investment and hence will reduce the private effective demand. Thus the expansionary effect of government expenditure will be partly neutralised by the contractionist effect of higher taxation on private investment and consumption. This adverse effect on the private sector will not be there if additional government expenditure is financed by 'created' money and therefore the expansionary effect of government expenditure will correspondingly be greater.

4. Deficit Financing and Economic Development. What scope is there for deficit financing to be used as an instrument of economic development in the under-developed countries like India ? In the chapter on Theory of Employment, we have observed that the basic problem confronting these countries is that of a population growing much faster than the rate of capital formation. If these countries are to provide full employment to their labour force, they need huge amounts of capital. Unlike the advanced economies, the problem facing under-developed countries is not one of deficiency of effective demand but lack of sufficient capital. In the advanced capitalist countries, the task of capital formation is in the hands of private entrepreneurs but in poor countries there is a dearth of people willing and able to undertake entrepreneurial functions. Hence if these countries are to develop rapidly the responsibility must rest with the government.

The basic problem as explained earlier, can be solved only by increasing the rate of investment. This requires additional resources and in the absence of sufficient foreign aid, they can come out only through increased domestic savings and their being channelised along productive lines. One way of increasing domestic savings is through additional voluntary efforts on the part of the public. These savings are then utilised through the national small savings schemes to add to the resources available to the government. But in a country where a majority of people are living on the subsistence level, the margin between income and consumption is very low so that voluntary savings, howsoever welcome, cannot by themselves provide sufficient resources for development. The government may also attempt to increase the volume of resources by additional taxes. During the last few years, taxes have been increasing in our country to find resources for development activity. Yet because of extreme poverty of the great mass of the people, additional taxation beyond a point raises difficult problems, both economic as well as political. Therefore, in their anxiety to implement development schemes, the governments are compelled to resort to deficit financing. In the First Five-Year Plan, of the total actual plan outlay of Rs. 1960 crores in the public sector, 21 per cent. of the outlay worth Rs. 420 crores was financed through deficit financing. In the Second Five-Year Plan, there is a further provision for Rs.1200 crores of deficit financing. What are the problems raised by deficit financing ?

5. Deficit Financing and Inflation. Deficit financing practised during the depression in advanced countries does not generate inflationary pressures because of the elastic nature of the supply curves of output. Additional government expenditure leads to an increase in effective demand, depending on the magnitude of the multiplier. Similarly, when supply of output can be increased easily to match additional demand, there need be no inflationary pressures. In advanced conntries, during the depression, there is lot of excess capacity in the system so that an increase in output presents no difficult problems.

The situation in under-developed countries, however, is different. Here an increase in investment does create additional demand but a corresponding increase in the supply of output cannot be taken for granted. Firstly, an under-developed country suffers from the dearth of capital and there is no excess capacity to be utilised for creating additional supply of consumers' goods. Besides, the basic wage-goods industry *i.e.*, agriculture suffers from an inelastic supply curve in the short run. In a subsistence agriculture, when the demand for agricultural products goes up, the farmer often lacks the willingness as well as the ability to increase his output. The farmer's demand for non-agricultural goods to be used for his consumption is limited so that when agricultural prices rise relatively to the prices of industrial products, the farmer can satisfy his needs with a lower effort than before and his reaction may well be to work less in the next period. Besides, even if he wants to increase his output, his ability to do so is very limited. His holding is a tiny one and often lies scattered all over the village, he lacks resources to buy more and better seeds and manures, irrigation facilities are lacking so that even with the best will in the world, unaided by any outside agency, the farmer's efforts to increase his output may not bear fruit. In the absence of an elastic supply of consumers' goods, a development plan carries with it a great inflationary bias.

In the earlier stages of development, the inflationary danger is very real indeed. This is because of the urgent need to invest large sums in the creation of an adequate system of transport and communications. Such investments generate demand like any other investment outlay yet they do not directly add to the supply of output of consumption goods. For all these reasons, deficit financing in under-developed countries is full of inflationary potentialities and these have to be watched carefully so as to keep them under control. Deficit financing results in a net increase in the money supply with the public. Of course, there is no direct relation between an increase in money supply and the inflationary rise in prices. If, for example, the newly created money is merely hoarded or saved, no inflationary pressure is generated. But to the extent that new money is used to offer additional employment to the hitherto unemployed or the new recruits to the working force, a large part of it will be spent and hence add to the level of effective demand. Similarly, if sufficient additional supply of consumers' goods can be made available with the help of additional investment, once again there need be no inflationary pressures and supply and demand may be in equilibrium at a higher level. However, if for various reasons as mentioned previously, supply cannot be increased rapidly and sufficiently, the pressure of demand may lead to an inflationary rise in prices.

6. Minimising Inflationary Potential of Deficit Financing. The following measures will minimise the inflationary potential of deficit financing.

(*i*) *Fiscal Policy.* Through a proper disinflationary fiscal policy, the inflationary pressures generated by deficit financing can be controlled to some extent. This involves raising taxes on income and consumption and reduction of non-essential government expenditure. Through various tax measures, the government can mop up a part of the increase in incomes generated by the development expenditure. All these measures will reduce the pressure of demand on the available resources.

(*ii*) *Monetary Policy.* By adopting a restrictive monetary policy, non-essential private investment can be kept under control, thereby releasing resources for the expansion of essential investment.

(*iii*) *Selective controls.* Through selective credit, physical and fiscal controls, the government can influence the behaviour of private investment and channelise it to desirable lines. For example, scarce materials can be rationed, building activity can be controlled and controls imposed on capital issues by the companies.

(*iv*) *Proper allocation of resources.* All the above measures have for their aim the reduction of pressure of demand. But attempts should be simultaneously made to increase the supply of output of consumption goods. In this connection, a proper balance must be kept between agriculture and industry, heavy and light industries. Agriculture is the supplier of basic wage-good *i.e.*, food. Therefore, a programme of economic development which fails to lay proper emphasis on the development of agricultural production must run into inflationary difficulties. Similarly, industries requiring small investment and maturing quickly should also receive their due emphasis.

(*v*) *Developing an import surplus.* The supply of goods can also be increased by incurring an import surplus. In the First Five-Year Plan of India, there was a provision for drawing down our sterling balances by Rs. 290 crores to dampen the inflationary effects of deficit financing. (Actually, however, deficit financing was much higher than anticipated and withdrawal of sterling balances was smaller than expected). However, there is a limit to which a country can have an import surplus. This is limited by the availability of resoures of foreign exchange previously accumulated or by receiving fresh foreign loans.

7. **Scope and Limitations of Deficit Financing.** The above indicates alike the scope and limitations of deficit financing. Deficit financing has a definite place in development finance but it is desirable to keep it within safe limits. The extent of deficit financing depends on our ability to control inflationary pressures by keeping demand in check as well by a simultaneous increase in the production.

CHAPTER XLIX

ECONOMIC SYSTEMS

1. **Capitalism.** Economic activity in a country is very largely determined by the type of economic system prevailing there. The main systems are capitalism, socialism and communism. Let us now study these systems. To take capitalism first.

Under capitalism, all farms, factories and other means of production are the property of private individuals and firms. They are free to use them with a view to making profit or not to use them if it so suits them. The desire for profit is the sole consideration with the property owners when they deal with their property in any manner. Everybody is free to take up any line of production he likes and is free to enter into contracts with other fellow citizens for his profit. Although all modern States do impose certain restrictions in the interest of general welfare, yet even these restrictions leave much latitude to the propertied classes to use their property in any manner they like, to start any business they think profitable to themselves, and to enter into contracts they think necessary in their own interest.

The definition of capitalism, given by the Webbs, brings out the necessary implications of the system. They define it thus : "By the term 'capitalism' or the 'capitalistic system' or as we prefer the 'capitalist civilisation', we mean the particular stage in the development of industry and legal institutions in which the bulk of the workers find themselves divorced from the ownership of the instruments of production in such a way as to pass into the position of wage-earners whose subsistence, security and personal freedom seem dependent on the will of a relatively small proportion of the nation, namely those who own and, through their legal ownership, control the organisation of the land, the machinery and the labour forces of the community and do so with the object of making for themselves individual and private gains."

2. **Outstanding Features of Capitalism.** A study of capitalism reveals several outstanding features of this sytem : (*i*) The most important feature of capitalism is the existence of private property and the system of inheritance. Everybody has a right to acquire private property, to keep it, and, after his death, to pass it on to his heirs. The result of this system is that inequalities of wealth distribution are perpetuated. The rich people become richer and the poor become poorer.

(*ii*) Allied with this feature is another *viz.*, that instruments for production are owned by private individuals and they are managed by the owners exclusively for their own benefit. Thus private individuals are the owners of farms and factories. They carry on the business of agriculture, trade and industry for their own personal profit and not for the benefit of the society. The result is that the lion's share of the national dividend goes to the powerful capitalist and the rich landlord. The masses are exploited and do not get a fair return on their labour.

(*iii*) From this arises another feature of the present economic order, *viz.*, that there is class conflict. The society has been divided into two classes, the "haves" and the "have-nots" which are constantly at war with each other. There is the conflict of labour and capital going on in all capitalistic countries, and there seems to be no near solution of this problem. One regards the other as its natural enemy. It seems this class conflict is inherent in capitalism.

(*iv*) A very outstanding feature of the capitalistic order of the society is economic freedom. This freedom implies three things: (*a*) Freedom of enterprise, (*b*) freedom of contract, and (*c*) freedom to use one's property. Everybody is free to take up any occupation that he likes, and to enter into contracts or agreements with fellow citizens in a manner most profitable to him. Actually, however, there is no absolute freedom in these respects. In the interest of general welfare, certain restrictions are imposed by all States on individual rights. Freedom to choose one's occupation is only in name. Family influence, the resources of an individual, prejudices, and other social restrictions stand in the way of a person choosing the occupation that he likes. The result is that only poorly-paid occupations are open to the poor.

(*v*) A very remarkable feature of the present economic order is its unco-ordinated nature. There is no conscious regulation or central direction of economic activity. Everything seems to go on automatically. Production is conducted as a result of the decisions of numberless isolated entrepreneurs. It is also at the same time influenced by the vast army of individual consumers who make their decisions without consulting one another. The consumer is the king. It is consumers' preferences (or aversions) which finally decide what should be produced and what should not be produced. They furnish the demand side and the unco-ordinated activities of the producers the supply side. Somehow the demand and supply adjust themselves to each other. Price serves as the sign-post or the signal. Price influences the consumers as well as the producers. That is why the present system has been described as "government by price."

(*vi*) A prominent feature of the present economic order is the vital role which the entrepreneur plays under this system. The entire productive machinery of the country is under his direction. It is he who hires the other factors of production and undertakes to pay them. He is the sole agent of the community in the matter of production. It is difficult to see how the present system can work at all in the absence of the entrepreneur. Everything hinges on him.

(*vii*) We also notice another feature of the present economic system, *viz.*, the control of business goes with risk. This has been called the Golden Rule of Capitalism. He who risks his money must also control the business. He who pays the piper must call the tune. If capital belongs to some other people and the control is vested in the hands of those who have no stake in business, we can imagine that the decisions will be made in a very irresponsible manner.

(*viii*) We may also notice that the present economic order is not only based on competition, but also on combination or cooperation among the various interests. The buyers compete with buyers and the sellers with sellers; the labourers compete with one another in order to get jobs, but they also combine in trade unions to fight the capitalists. Similarly, the employers not only compete among themselves but they also combine to form associations to safeguard their interests. Thus, under the present economic order, combination and competition go side by side.

3. Achievements of Capitalism. Capitalism has to its credit a number of achievements : (1) The supporters of capitalism point to the rich variety and abundant supply of goods and services. The lure of profit compels the entrepreneurs to take risks, and to conquer new fields in production. Standard of living has risen, comforts of life have increased, and life has become richer and fuller. This is the service rendered by capitalism to society.

Secondly, the limited resources of the community are put to the most economical uses with as little waste as possible. The person responsible for the waste receives prompt punishment for his miscalculation in the form of losses or bankruptcy.

Thirdly, the richest reward under capitalism goes to the ablest, the most daring as well as prudent entrepreneur. A man who takes the initiative and shows extraordinary resourcefulness and pluck makes the highest profits. Nothing seems to be more just than that the rewards should be apportioned according to merit.

Fourthly, the consumer's control gives the system a democratic tinge. Nobody likes that his consumption should be dictated by some superior authority. In the capitalist economy, an attempt is made to adjust production according to the consumers' wishes. They consume what they like and not what is supplied to them.

Fifthly, since under capitalism control goes with risk, economic decisions are wisely taken.

Finally, if the survival of the fittest is any criterion of the soundness of a system, capitalism is indeed sound and strong. So many crises have overtaken the system, but it somehow emerges, a bit crippled no doubt, but victorious. Its adaptability to the changing economic conditions is indeed surprising. What greater proof do we need of its toughness and resiliency than the wonderful manner in which it has stood the strain of costly wars ?

4. Criticism of Capitalism. But capitalism is now being assailed from all directions. First, competition, which is the cardinal feature of capitalist economy, is a sheer waste. Colossal expenditure is incurred in advertisement and salesmanship simply to defeat a rival. Resources employed by those, who are defeated in the race, go to waste. Cut-throat competition does not confer any corresponding social benefit.

Secondly, the efficiency of the capitalistic system depends on the existence of free competition and the mobility of the factors of production. But the existence of friction, legal, social and economic, hampers free competition with the result that the factors of production often lie idle.

Thirdly, the supposed harmony between the interests of the consumers, *i.e.*, the society, and these of the producers, does not actually exist. Lack of free competition, deliberate deceit practised by unscrupulous producers and the ignorance and the impotence of the individual consumer turn the consumer king into an abject slave, a victim of exploitation.

Fourthly, the recurrence of the trade cycles, due to over-competition and over-saving resulting in over-production, must be considered one of the bitterest fruits of capitalism. Production is unplanned and is being augmented by ever increasing accumulation of capital, while the bulk of the consumers are being impoverished more and more. In these circumstances, it will be a miracle if there is a proper balance between production and consumption.

Fifthly, the workers, who constitute the bulk of the nation, have to live under a perpetual dread of dismissal, They have no sense of security.

Sixthly, capitalism lays undue emphasis on property rights as against human rights. Man, the first of God's creation, is treated like an ordinary chattel.

Seventhly, capitalism has sown the seeds of eternal social unrest by dividing the society into two hostile camps of labour and capital They look sullenly at each other, and are ever on the lookout for an opportunity to fight.

Eighthly, the extreme inequality of wealth distribution, which is being accentuated as time goes on, is the most galling outcome of capitalism. As G. D. H. Cole remarks, "There is a world of difference in terms of happiness between the high priest and the slaves in the temple of industry."[1]

Finally, capitalism is full of mortifying anomalies, the few indulging in all conceivable luxuries and the majority living under semi-starvation conditions. The crops are rotting while human beings are starving, and machines are lying idle inside the factories, while unemployment is raging in all its fury outside.

These few points constitute a sufficient indictment of the present system. Ruthless exploitation of women and children, callous disregard of the aged, the sick and the unemployed, and the mercenary motives mainly governing human relations have all pricked the social conscience, and people are furiously looking round for an alternative. Already the death-knell of capitalism has been tolled over a large part of the globe. Capitalism now constitutes only a small patch in the increasingly totalitarian and collectivised world. As an escape from the intolerable conditions prevalent under capitalism, the chief alternatives suggested are : Planned Capitalism, Socialism and Communism. We turn now to consider these alternatives.

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[1] *Principles of Economic Planning*, 1935, p. 3.

5. Planned Economy. Since the Great Depression of the 'thirties, in which the world witnessed the unseemly and unusual spectacle of starvation in the midst of plenty, the world has increasingly become planning-minded. It is no longer considered safe to let the economic system function automatically according to demand and supply. The danger of chronic maladjustment is inherent in the present system. Few people now expect that left to themselves the economic forces would bring about an optimum distribution of the economic resources of the country. As Sir William Beveridge remarks : "It is no more likely that the individualistic growth of many small separate businesses will produce an industry laid out on the lines of maximum overall efficiency, than it is likely that the disorderly, uncontrolled activities of innumerable small property-owners and builders will produce a planned town without needless corners, duplicate streets and traffic congestions." Planning is especially advocated for preventing the recurring maladjustments which generate a trade cycle under the present economic system.

But what is planning ? There is a lot of confused thinking on the point. As Robbins says, "Strictly speaking all economic life involves planning....To plan is to act with a purpose to choose, and choice is the essence of economic activity."[1] But this is not the sense in which the term 'planning' is generally used. Nor does planning mean rationalisation of industry or reorganisation of agriculture. Towards the close of the Second World War the various departments of the Central and State Governments in India prepared development schemes. This is also planning—in a sense, planning ahead. But such schemes do not convey quite accurately the essential idea underlying economic planning.

Planning, as understood by economists, implies centralised control and conscious and deliberate layout of the national resources with a definite end in view. All economic resources are definitely integrated and co-ordinated so that duplication and senseless competition may be eliminated. Lewin Lorwin defines planned economy as "a scheme of economic organisation in which individual and separate plants, enterprises and industries are treated as co-ordinate units of one single system for the purpose of utilising all available resources to achieve the maximum satisfaction of the people's needs within a given time."[2] Or as Dickenson puts it, "Economic planning is the making of major economic decisions—what and how much is to be produced, and to whom it is to be allocated by the conscious decision of a determinate authority, on the basis of a comprehensive survey of the economic system as a whole."[3]

The essentials of planning which emerge from this conception are :—

(*a*) That it is to be conscious and deliberate with a definite aim.

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[1] Robbins, Lionel. *Economic Planning and International Order*, 1937, p. 4.

[2] Quoted by George Frederick in his *Readings in Economic Planning*, p. 153.

[3] *Economics of Socialists*, 1939, p. 41.

(*b*) That there must be one single undivided authority which is responsible for planning and co-ordinating the various economic activities; delegation of functions, however, is not ruled out.

(*c*) Planning must be of the entire economic field and not merely piecemeal planning.

(*d*) That the available resources are to be scientifically distributed with the sole object of general welfare.

Planning has now crossed the realm of merely academic discussion and has become an essential plank of practical policy. The N. I. R. A. (National Industrial Recovery Act) of June 1933 gave the U.S. Government a sweeping control over the various aspects of production. Nobody doubts the success of this measure. Planning has been even a more splendid success in Russia and has given her the first place in Europe and the second place in the world in industrial production. In Germany, too, where there was no State ownership of capital, planning removed unemployment, raised wages and developed agriculture. Without planning Germany would not have shown such a wonderful recovery.

Planned Economy can co-exist in any form of economy. Even under capitalism planning is possible. All the paraphernalia of capitalism, *viz.*, private property, individual initiative and enterprise, may be retained but subjected to greater State control. All entrepreneurs will have to work under the plan. From the very nature of things, planning under capitalism can have only a limited scope. It is also possible that there may be socialist economy without any pre-conceived and conscious plan. Economic policy may be one of drift. But planning, if it is to be on a sure and stable footing, involves some form of socialism.

Critics of planning point out that planning will put an end to economic freedom. It is said that the consumer will lose his sovereignty and the producer his freedom of enterprise. But this is a wrong notion. Planning is perfectly consistent with economic freedom. As Mrs. Wootton observes, "There is nothing in conscious planning of economic priorities which is inherently incompatible with the freedom which means most to the contemporary Englishmen or American".[1] The consumers can be given freedom to spend as they like and the producers to produce what they wish.

6. Socialism. Socialism, as an alternative to capitalism, has the widest appeal. A Swedish king once remarked to his minister, "If one is not a socialist up to the age of twenty-five, it shows that he has no heart; but if he continues to be a socialist after the age of 25, he has no head." Socialism seems to have caught the imagination of youth all the world over.

But there is no complete agreement as to what socialism exactly is. It seems there are as many types of socialism as there are socialists. Socialism has been compared to a hat which has lost its shape because everybody wears it. It has been aptly remarked that "socialism has been called many things and many things have been called socialism." The kaleidoscopic nature of socialism has been described by Shadwell thus[1]: "It is both abstract and concrete, theoretical and practical idealist and materialist, very old and entirely modern; it ranges from a mere sentiment to a precise programme of action; different advocates present it as a philosophy of life, a sort of religion, an ethical code, an economic system, a historical category, a juridical principle, it is a popular movement and a scientific analysis, an interpretation of the past and a vision of the future, a war cry and the negation of war, a violent revolution and a gentle revolution, a gospel of love and altruism, and a campaign of hate and greed, the hope of mankind and the end of civilisation, the dawn of the millennium and a frightful catastrophe."

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[1] *Freedom under Planning*, 1945.

How paradoxical ? An acquaintance with different schools of socialists will be helpful in understanding the essentials of the socialists' plan.

7. Marxian Socialism or Scientific Socialism. Karl Marx, who wrote in 1867 his famous book *Das Capital*, the Bible of Socialism, is considered to be the father of scientific socialism. He tried to put the theory of socialism on a scientific basis. The chief points in his theory are :—

(1) *Materialistic conception of history.* He seeks to explain every event of history on economic grounds. He gives an economic interpretation of history. All wars, riots and political movements have their origin in economic factors. There is an appropriate political organisation corresponding to every economic stage. A capitalist economy, for example, will evolve a system of government which perpetuates and supports property rights.

He goes on to explain how capitalism will generate conditions which will replace it by socialism. The capitalists will grow in wealth as time passes, but will become fewer and fewer, the bigger whales swallowing the smaller ones. Monopolies will be created, production will expand necessitating scramble for markets abroad. This will lead to an imperialist war, and one war will be followed by another more terrible than the preceding one till capitalism perishes in the conflict, and the dictatorship of the proletariat is established.

(2) *Theory of surplus value.* Karl Marx says that the manufacturer gets for his commodity more than he has spent on labour and other costs. The excess of market value over the costs is the surplus value. This surplus is the creation of labour. It is created because labour is paid much less than is due to it. He characterises the appropriation of the surplus value by the capitalist as robbery and exploitation. A commodity, according to him, is simply 'crystallised labour' or 'congealed labour'.

8. Collectivism or State Socialism. The collectivists or the State socialists believe in parliamentary democracy and nationalisation of the means of production. They want to capture the political machinery, strengthen it and use it for the realisation of the socialists' aims and ideals. The powerful State engine is to be utilised for the production of wealth and its equitable distribution. State is to be all in all, and as soon as the socialists have captured it, they have reached the goal. The State will do for them all that they want. Private enterprise will be put an end to. All production will be carried on by salaried State officials and profits will go to the State coffers and utilised for the uplift of the masses. The only difference between capitalism and State socialism is that under the latter, means of production are owned and managed by the State instead of the private entrepreneur, otherwise the exchange mechanism of capitalism, *e.g.*, pricing, marketing etc., is retained.

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[1] *The Quarterly Review*, July, 1924, p. 2.

Among the chief tenets of the socialist creed may be mentioned (*a*) state ownership of productive resources, (*b*) redistribution of national income, (*c*) economic planning, and (*d*) peaceful and democratic evolution of the economic system.

9. Guild Socialism. The guild socialists start with distrust of the State. They do not consider, as the collectivists do, that the State can efficiently run the productive machinery. According to the guild socialists, the capitalists are to be expropriated. But the farms, factories and other instruments of production are to be handed over to the workers' guilds who are competent to organise and manage production efficiently. In other words, there is to be self-government in industry. The State will simply supervise and act as the representative of the general body of consumers in fixing the price and looking after the quality of the goods produced.

The essential idea is that the ownership of the means of production is to be vested in the State but their actual operation is to be entrusted to the workers themselves The State is simply to see that the consumer is not exploited or defrauded. Guild socialists seek to do away with the evils of too much centralisation and the inefficiency of the bureaucracy in business. They claim that the decentralised system they propose to set up will ensure both real democracy and efficiency.

10. Syndicalism. Like the guild socialists, the syndicalists, too, do not believe in the efficiency of the State as an instrument for the realisation of the socialist ideal. The State official, whatever the class to which he belongs, has a typical *bourgeois* mentality. He can never understand what the worker wants. He is in the habit of bossing over others. The syndicalists, therefore, are opposed to the strengthening of the State inasmuch as it will create so many petty tyrants. They propose to build up social, political and economic structure on a network of trade unions.

The syndicalists do not believe that they can realise their aims through constitutional means They believe that State officials are too powerful. They, therefore, rely on direct and violent action. Strike is their chief weapon. They believe that even if the strike fails, it teaches the workers a much useful lesson in economic warfare; it builds up workers' solidarity and sharpens their hatred for the capitalists. This hatred must not be allowed to cool. They advocate strike after strike and then at the end, a general and prolonged strike till the political machinery is paralysed, and they are able to capture power. The syndicalists lay stress on the destruction of the existing structure and keep deliberately vague the post-revolutionary structure of the society which they want to create. Their methods are destructive rather than constructive.

11. Communism. The present-day Communism, as is clear from the Communist Manifesto of 1845, refers more to the theory of the method for realising their ends rather than the society the Communists wish to create. They lay stress on the formation of a network of Communist organisations all over the country and the world, capturing key posts in other organisations and carrying on their work silently adding to the number of adherents. When the party has become sufficiently strong, it will throw out the capitalists, capture government machinery and lay the foundation of the proletariat State. The State machinery will be utilised to crush all opposition and to expropriate the capitalists. The aim will be to create a classless society where there is no distinction of high or low, rich or poor. When the objective is achieved, the State will become unnecessary. It will 'wither away'.

As for the type of society which the Communists envisage, some idea can be gathored from Plato's *Republic* or Wells' *New Worlds for Old*. The Communists propose to abolish all forms of private property, not merely in the instruments of production but also in the consumers' goods. Those consumers' goods which are intimately connected with the person of the consumer, *e.g.*, food and clothing, are transferred to individuals and families and those which are not so connected, *e.g.*, houses, are owned by society, only their services are transferred to the consumers.

People will work according to capacity and get according to need. Everybody is to be assigned a definite job. He cannot choose his own occupation. Nobody will have a house of his own or a bank account. Everyone will be a government employee; he will not be paid cash but he will get his meals in the State kitchens and live in Government quarters. He will be provided commodities and services for consumption not of his choice but what the State chooses to give according to production at the time. The bringing up of the children, their education and fixing up, will be a State concern. The pricing system will disappear. The State will control production, assign jobs, fix remuneration and prices of goods and services without profit motive. A very alluring dream indeed !

In a Communist society, there cannot be a commercial crisis. Unemployment, distinction between rich and poor, and strife between labour and capital will all disappear. The idea is obviously Utopian. The Russians in the early stages of their Revolution tried to put these ideas into practice and abolished money and exchange. But the system failed. Money economy had to be restored and price mechanism revived. Different wages were paid to encourage and reward efficiency.

12. Anarchism. The Communists' ultimate aim is to bring about a structure of society in which State will cease to exist—it will 'wither away'. By anarchy, in ordinary language, we mean misrule, disorder, etc. But, according to socialist nomenclature, it means absence of Government, because it is unnecessary. The Communists hope that when the world has been purged of capitalism; vices like greed, selfishness, aggressiveness, deceit, etc., will disappear and, in their stead, self-sacrifice, service of others, virtue, sympathy, an attitude of 'give' rather than 'take' will come to prevail. Man will have been so much uplifted by then that police will be unnecessary. Courts of law will be superfluous. Is it incredible ? Fahien reported about ancient India that there were no thefts and robberies and people did not lock their houses. So the anarchists' dream may be realised after all !

The social and economic life will be organised in autonomous bodies or associations and they will, through voluntary agreements, regulate their affairs. Each will respect the rights of the other and hence there will be no difficulty. The government is to be like the policeman on traffic duty. When at certain hours during the day, the policeman is away, the traffic regulates itself. Exactly in the same way the society will function. Another sweet dream ! We owe this to Prince Kropotkin. According to the anarchists, State is needed only to protect property and prevent unjust gains accruing to capitalists or their amassing ill-gotten wealth and plunder. When these are achieved, the State disappears.

13. **Fabian Socialists.** These socialists are men of literature Bernard Shaw was one of them. They sincerely believe that socialism is a question of conviction. If the people can only be convinced of the virtues of socialism, no power on earth can prevent its coming about. Through literary propaganda—novels, dramas, short stories— they expose the evils of capitalism and bring out the merits and necessity of socialism It is hoped that, in course of time, the world will come to believe in socialism, and socialism will then come to prevail. They may not be wrong.

14. **The Essential of a Socialist Scheme.** We have made a very rapid survey of the various shades of opinion among the socialists. In spite of these divergences of opinion—in some cases very acute—it is possible to visualise a scheme to which the majority of the socialists would pledge their support They all believe in the abolition of private ownership in the instruments of production. Land, factories, railways, mines and every other means of production must be nationalised. Their ownership and control are to be vested in the State so that the State may provide work for everybody. There is to be no private enterprise. Production is to be initiated and conducted by the State which will pay wages and other costs and keep profits to itself Interest and rent as payments respectively to the capitalists and the landlords will disappear, for the State will be the capitalist, landlord and entrepreneur. All socialists except the Communists, are prepared to allow private property in the form of a house, furniture, household equipment and other consumers' goods

Living on unearned income is to be discouraged Remuneration for work is to be according to the nature of work and is not to be equal. It will vary according to ability. A limited operation of the law of demand and supply in this connection is envisaged. There is thus no basis for the belief that under socialism all would be equal economically. No economic equality is guaranteed. What can be assured is equality of opportunity for all irrespective of rank. The State is to help a person choose an occupation and make him fit for it.

The State is in charge of both production and distribution. The allocation of the poductive resources of the community will be determined according to the direction of a central authority. The profits of production instead of going into the pockets of a few private individuals, go to the coffers of the State. They are to be spent in ameliorating the lot of the common man by providing him, and his family, with adequate medical aid, full and free education and ample means of recreation and entertainment. Freedom from want is guaranteed and fear, born of insecurity, is to be banned. Everybody is to select his occupation and is free to spend his income in any manner he likes. There is to be no regimentation. This, in short, is the socialist plan.

For a long time, the definition of socialism as given by Webbs was accepted by a majority of the socialists. Their definition runs thus : "A socialised industry is one in which the national instruments of production are owned by public authority or voluntary association and operated not with a view to profiting by sale to other people, but for the direct service of those whom the authority or association represents." This definition does not correspond to the present notion of socialism, because it does not imply any idea of planning. The definition given by Dickenson, therefore, seems to be better. According to him, socialism is an economic organisation of society in which the material means of production are owned by the whole community and operated by organs representative of, and responsible to, the community according to a general plan, all members of the community being entitled to benefits from the results of such socialised planned production on the basis of equal rights.[1] According to another definition which brings out the implications of socialism more clearly, "Socialism refers to that movement which aims at vesting in society as a whole, rather than in individuals, the ownership and management of all nature-made and man-made producers' goods used in large-scale production, to the end that an increased national income may be more equally distributed without materially destroying the individual's economic motivation or his freedom of occupational and consumption choices."[2]

15. Case against Socialism. The critics of socialism claim to have pricked numerous holes in the socialist fabric. Apart from some silly objections, which have been exploded since long—*e g.*, socialism would ban religion, abolish marriage and family life, and the dangling of Malthusian bogey to frighten the simple and ignorant minds—earnest efforts have been made to understand socialism and point out some real dangers and difficulties.

The most important set of arguments advanced against socialism is one against the bureaucratic running of the economic machinery.

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[1] Dickenson, H.D.—*Economics of Socialism*, 1939, p. 11.

[2] Loucks and Weldon Hoot—*Comparative Economic Systems*, 1948.

Bureaucracy is considered to be inefficient in running a business. The civil servant does not feel the same keen self-interest as the employee of a private corporation whose tenure is not so secure. The civil servant knows that he will get promotion by seniority; no amount of alertness or extra work is going to push him up in the graded list. His main concern is to let things go on somehow without a positive breakdown. One thing that he wants to avoid is public criticism. He will, therefore, take no bold risks and will be content with a moderate measure of success being merely guided by rule and precedent. Initiative and resourcefulness are at a discount. The business policy will be timid and unenterprising. There is routine and red-tape, a place safe for men of mediocre calibre and no room for an extraordinary and dashing spirit. No first-rate work can be done by second-rate men.

A government deparment cannot claim to score success in business where rapid decisions have to be taken and bold policies are called for. The government personnel is not such as can conquer new fields. The government can, and does, attract able men but conditions in government service are not congenial for the display of extraordinary ability. The reward is not considered worth the trouble. Bureaucracy will further mean bossism, loss of individual liberty, gestapo, etc.

It is also urged that government cannot secure the huge amounts of capital which are necessary for the efficient running and expanding of all industries and trades.

Under socialism, there will be no automatic indicator for the most economical allocation of the resources of the community among different industries. Under capitalism, there are consumers' preferences which, through price-mechanism, bring about an optimum distribution of these resources. But under socialism it will be all groping in the dark. Some commodities will be produced in excess and wasted, and there may be a shortage of other resulting in unstaisfied demand. A chronic maladjustment in demand and supply is feared. The task of organising production, of allocating every acre of land to its proper use, of setting every worker on the right job and of investing every rupee in the direction of maximum efficiency is too big to be performed by any single authority.

Under capitalism, the consumer enjoys sovereignty. Of course, this sovereignty is limited by his income, existence of monopoly, etc., yet the domain is wide enough for him to pick and choose. But, under socialism, he will lose this sovereignty altogether. Consumption will have to adjust itself to production. This loss to the consumer is a real loss. He will not be able to maximise his satisfaction. Socialism, therefore, means hardship, sacrifice and privation for the consumer. The State will no doubt fix the prices, but it will be all arbitrary. The price fixation will be rigid and will lack the resiliency of market mechanism, which is sensitive to even the slightest change in the consumers' preferences.

It is also feared that incentive to hard work and stimulus to self-improvement will disappear altogether when personal gain or self-interest is eliminated. People will not give their best. Inventive ability, enterprising spirit and the go-ahead attitude will languish, and creative work will become impossible. It is remarked that "a government could print a good edition of Shakespeare's works, but it could not get them written."[1]

Another charge against socialism is that, when the freedom of enterprise disappears, even the free choice of occupation will go. Workers will be assigned certain jobs and they cannot change them without the consent of the planning authority. Every worker is dovetailed in the scheme, and he must remain there. This loss of freedom may be really galling.

Some people have been disappointed in socialism, because in Russia, where it has been in operation, it has failed to bring about economic equality. The difference between the rich and the poor is still there. The dream of a classless society is far from being realised. The workers under capitalism, *e g.*, in the U.S.A. and England, are not so worse off. They enjoy a high standard of living. They are not convinced that under capitalism the poor go on becoming poorer The rich are no doubt getting richer but the lot of the poor is also undoubtedly improving. So some degree of scepticism in the efficacy of socialism as a panacea for all social ills has grown and damped the ardour of some enthusiastic socialists.

That under socialism there is no unemployment is conceded, but the critics retort by saying that there is also no unemployment in a jail They regard a socialist State as one big prison-house and they do not think that employment is any compensation for the loss of liberty

It may also be pointed out in the end that Marxian socialism is not so scientific after all. Labour is not the only cause of value and has not the sole right to its appropriation. Few are convinced of the accuracy of Marx's materialistic interpretation of history. Economic motives are no doubt the strongest but they are not the only ones to sway human actions

16. Answer to the Critics of Socialism. This looks a formidable array of arguments against socialism, but it is not so formidable as it seems. The strength of socialism lies in the proved evils of capitalism. The world is periodically plunged into depression causing much dislocation, unemployment and suffering. Capitalism has not been able to ensure stable economic conditions. National resources have been exploited for personal profit. Human beings, especially women and children, have been used as so many machines simply to enrich the capitalists. Who can help hearing the "Cry of the Children" ?

How long, O cruel nation,
Will you stand, to move the world, on a child's heart,—
Stifle down with a mailed heel its palpitation,
And tread onward to your throne amid the mart ;
Our blood splashes upward, O gold heaper,
And your purple shows your path !

—(*Elizabeth Barret Browning*).

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[1] Pigou—*Capitalism and Socialism*, p. 80.

The social conscience feels outraged at the sight of a poor family working the hardest, yet not getting two square meals a day, dressed in rags, living in dirty cells, and children dying because they cannot get medical aid or milk. On the other hand, the rich are rolling in luxuries; their horses and dogs are better fed and housed than their fellow human beings. They perhaps think that the poor man is not after all a human being: he is some other specie ! A system which produces such iniquities and callousness stands self-condemned.

Look at the alternative. Socialism bans trade depression and removes unemployment which, under capitalism, always hangs over the workers' heads like a Damocle's sword. A great worry is off. Free choice of occupation under capitalism is a farce. Who can really choose his occupation ? The choice is limited by his parents' means and influence. Sometimes a man would like to get any work that he can. But there is no work. Capitalism throws him on the scrapheap. Who would not like to be put on to a job compulsorily rather than face enforced unemployment and starvation ? A socialist State provides permanent and pensionable job for everybody according to his aptitude and capacity.

A socialist State can allocate the resources of the community among the various uses with the sole consideration of social security and welfare. Consumers' wishes have to be replaced by higher social valuations. It is possible that at one stage there may be a shortage of some type of consumers' goods, but this is deliberately done in the higher interests of the society. Surely there is no harm in making a temporary sacrifice so that we or our children may be able to enjoy better standards later. Only a socialist State can build up a solid foundation for the country's strength and prosperity. The policy of a capitalist economy is a short-sighted one guided by the immediate gains of the entrepreneur.

Under socialism vast funds can be devoted to the expansion of education of all types, for provision of adequate medical facilities, and for rationalisation of industry and reorganisation of agriculture. The result is that human and material resources of the nation are immensely improved. A socialist State can easily find resources to help the poor, because the profits of industry, which, under capitalism, go to enrich the already rich and surfeited, are pooled in the State treasury. Many things, the consumption of which is considered essential for health and efficiency, may be supplied free or below cost. No doubt, consumption is regimented and it is curtailed in certain directions, yet there need be no hardship, for it may be expanded in some other and more desirable directions. A socialist State can provide free milk for children, free nursing, free education and free medical aid. It can give free cinema shows to the workers and provide for them swimming baths, recreational clubs, railway passes to week-end resorts, and light refreshment in the factory gratis. Such things are impossible in a capitalist economy, where lure of the lucre rules. A capitalist only looks to his dividend.

Production of all types can be immediately increased by a socialist State The achievements of the Russian Five-Year Plans are a standing monument to what can be achieved under socialism by people who not long ago were illiterate, ignorant, backward, conservative and poor peasants. Russia, too, like India, was a country of small farmers, almost all illiterate. Now there is nearly cent per cent literacy; and in production Russia has beaten every other European country which started in the race of industrialisation nearly one century ago. This shows that it is only in a socialist State that planning can really be effective. We saw that during the war there was no unemployment and production figures shot up to a level which would have staggered anybody only a few years before. This was all due to that fact that all phases of economic life were under the central State direction. A socialist State does exactly the same thing in peace times. It mobilises all the resources of the community in the most effective manner.

Dangers of bureaucratic management have been exaggerated. There is a lot of red-tapism in company management even under capitalism. A socialist State can also regulate credit and banking operations so that financial maladjustments are eliminated.

As for incentive to hard work, a socialist State can, by persistent propaganda and through instruction in the educational institutions, change the very psychology of the people and create new scales of values. It can offer production bonuses so that every worker does his best. Who will do the dirty and disagreeable work ? The socialists' answer is that most of it will be done by machinery. Machinery is not being put to such tasks now simply because man is cheaper than machinery Thousands of semi-starving people are available under capitalism to do such jobs on a small wage, because capitalism has impoverished the masses. But a socialist State, not working for profit, will be in a position to relieve man from all dangerous, dirty and degrading jobs.

Socialism may not be able to make everybody economically equal. This is due not to lack of organising ability in a socialist State. The cause lies in the innate inequalities among human beings. Nature does not make everyone alike. Everyone is endowed with varying degrees of intelligence and working capacity. No State can help it. It is not a matter for legislation. But a socialist State can discover the aptitude and ability of each citizen and develop them further by training and education, so that every citizen is enabled to make his best contribution to the welfare of the State. Real worth will not be allowed to be suppressed or depressed by poverty. The socialist State can pick up genius even from the lowliest families and provide it with the fullest facilities and opportunities. If, therefore, the attainment of economic equality is not considered feasible, at least equality of opportunity can be assured to each, and this will be no mean achievement. There can also be a considerable levelling up of the masses.

The balance seems to be heavily tilted in favour of socialism.

17. Progress of Socialism. Pigou remarks, " If we take as our representative of capitalism the actual economic arrangements ruling in this country now and leave socialism a vague concept, we are tilting the balance against capitalism. For we are setting a nude figure, with all its blemishes patent to the eye, against a figure that is veiled.'[1] But the figure is no longer veiled. There was a time when socialism was only to be found in books like More's *Utopia* or Plato's *Republic* or was sought to be put into practice by idealists like Robert Owen. Small communistic societies, *e.g.*, Harmony, Oneida Community, etc; were established. But the founders were bitterly disappointed. They were just a few oases of socialist brotherhood in the vast desert of competitive capitalism. They existed within the capitalist States which maintained law and order. The modern socialist wants socialism to be all-inclusive and not merely small patches scattered here and there.

Socialism has now emerged from the utopian embryo. It is no longer a matter of economic theory, but has taken its stand on practical politics. The Communist Manifesto of 1848 created a sensation by its clarion call for union of all the workers of the world. It called for a revolution and said that the workers had nothing to lose except their chains and they had a world to win.

Since then socialism has been winning adherents all over the world. Jewish refugees from Germany established in Cyprus several communities run on socialistic lines The spread of socialism has been phenomenal in recent times. In the German election of 1919, socialists secured nearly 50% votes. Nearly one-third of the British electorate in 1924 voted for the Labour Party; in 1935 the percentage rose to more than 40. In 1945 they returned them with a solid majority. In France, more than one-third of the Deputies in 1936 were of socialist views. Spain had a socialist Government, which was ousted by General Franco through an unholy alliance with Hitler and Mussolini. The splendid success which attended the Russian arms in the recent war and the way they turned back Hitlerian hordes which no other nation could, have won the unstinted admiration of the world. Its necessary consequence is that almost all East European countries have gone 'red'. The Governments in Italy, Bulgaria, Yugoslavia, France, Austria and Poland have all socialistic leanings.

In the East, in China, the Communists have carved out a very big slice of the globe. The Communist victory in China may prove one of the momentous events in human history. Thus in the East, as well as in the West, the gospel of socialism is finding a ready response.

Indian intelligentsia, youth and leaders like Pandit Jawaharlal Nehru, actively believe in some form of socialism. India is pledged to establish a socialistic pattern of society and there is nothing to fear. The movement need not be a sudden revolution accompanied by all the horrors that a revolution brings. The change can be gradual and brought about by peaceful means. All socialists do not believe in revolutionary and abrupt changes For a long time all thinking elements have been everywhere in favour of increasing nationalisation of the principal means of production. All the monopolies can, without any remorse or provoking a protest, be nationalised. When an industry has become reduced to a routine; private enterprise is really out of place. It should be taken over by the government so that the profits can be secured for the community in general. The proper sphere for private enterprise lies in new industrial fields, where initiative counts the most.

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[1] *Capitalism and Socialism.*

The credit for creating enthusiasm for socialism belongs to Russia. It will not be out of place if we note a few facts about the Russian experiment.

18. The Russian Experiment. The Russian working class, with the support of the working peasantry, and under the leadership of the Bolsheviks led by Lenin, carried through the proletarian socialists revolution on November 7, 1917. A new State, where the working classes enjoyed effective political power, came into existence. The leaders of the Revolution, inspired by Marxian doctrines of socialism, started with a revolutionary programme. Key industries and land were nationalised without any compensation. The idea was to transfer the whole of private industry and trade gradually to public ownership and to re-organise agriculture on a socialist basis. But the Civil War (1918-20), as a result of the intervention of several foreign powers on the side of the domestic counter-revolutionary elements, thwarted the contemplated gradual transformation into a socialist society. The desperate situation created by the Civil War necessitated desperate measures to cope with it. These measures are collectively known as 'War Communism'. Its main features were : (*a*) Centralisation of production and distribution of all key products and services, and to this end nationalisation of even medium and small-scale industry and the institution of a system of compulsory requisitioning of agricultural surpluses from the peasantry ; (*b*) payment of wages in kind in view of the severe inflation which had rendered money almost valueless ; and (*c*) universal labour service to support the war effort.

With the end of the civil war, it was possible to revert to more normal methods. And it was necessary to do so to rehabilitate the economy that had been thoroughly wrecked by the war. Accordingly in 1921 was introduced the New Economic Policy. The essence of this policy was that while the State continued to occupy the strategic points in the economy, a limited degree of private enterprise was allowed over the rest of the economic field. The system of compulsory requisitioning of the entire agricultural surplus was replaced by a tax in kind to provide an incentive to the peasantry to increase production. A limited measure of private industry and trade was also allowed to revive industrial production and circulation of commodities. Wages once again came to be paid in money.

During the early years of the Bolshevist era, because of the three years' civil war, poverty and misery prevailed. The volume of production had shrunk to a fraction of the pre-war figure and the standard of living had greatly fallen. But the work of rehabilitation continued and by 1927 the pre-war levels were touched. In 1928 was inaugurated the first of the five-year plans which fixed targets for agricultural output and heavy industry. Policy of collectivisation was vigorously followed. Good-sized farms were created. Loans were advanced and machinery placed at their disposal. There was an enormous increase in agricultural output. It was nothing short of an agricultural revolution. In 1933-34, however, the pace of collectivisation was slowed down and individual profit making was permitted to some extent. Stalin followed a very realistic policy. He made full use of human psychology which desires power, influence, fame and reward. Badges of honour were awarded to industrial leaders, bonus and prizes were given for more efficient work. A spirit of rivalry and emulation was introduced among the various industrial groups and the whole thing was changed into a game where the team or the group worked for honour. Production was speeded up and, under the direction of the Gosplan (Planning Commission), the targets were hit. When semi-civilised, illiterate peasants, who had never known how to work in a group, were put into a new system, the civilised world at first looked derisively at Russia. But when the first plan achieved its aims, it stood aghast. The tractor plants, the machine-making tools, automobiles and other heavy machines came out of the factories like mushrooms.

The second plan paid more attention to the production of consumers' goods. In 1938, the third five-year plan covering the period 1938-42, was launched. By 1940, the Soviet Union had grown into an industrialized country. The output of pig iron had risen to 15 m. tons, of steel to 18.3 m. tons, of coal to 166 m. tons, of oil to 31 m. tons and of electricity to 48 billion kWT. The corresponding figures for 1928 had been 3·3 m. tons, 4.3 m. tons, 35.5 m. tons, 11.7 m. tons and 5 billion kWT. Economic development was then interrupted by the Nazi invasion which once again wrecked the Soviet economy. The Soviet Union was able to regain pre-war levels of output by 1948. The war thus interrupted progress for a period of 8 years. But the progress since then has been indeed remarkable. The fourth five-year plan was completed in 1950 and the fifth in 1955. The sixth five-year plan covering the period 1955-60 has been launched. It sets stupendous targets. In 1960, the Soviet Union will be producing 53 m. tons of pig iron, 68·3 tons of steel, 593 m. tons of coal, 135 m. tons of oil, 320 billion kWT. of electricity, 55 m. tons of cement and 180 m. tons of grain. This far exceeds the present combined output of Great Britain, West Germany and France taken together. It still falls short of the U. S. output but the Soviet Union is now confident of soon surpassing her also and thus emerging as the first country in the world in the matter of level of economic development. This confidence is reflected in the observation of the sixth plan to the effect that the Soviet Union now possesses all the necessary requisites for achieving, in an historically short period and through peaceful economic competition, its principal economic aim, namely, to overtake the most developed capitalist countries in *per capita production*.

19. Economic Problems in a Socialist State. It will be of interest to know how Soviet Russia has tackled the various economic problems.

Private property. Private property in the form of a house, a car, a few animals and other consumers' goods is allowed. A man is free to buy government bonds or securities. He can keep a deposit in the bank. Property up to the amount of 50,000 roubles can be transmitted by inheritance. But living on unearned income is discouraged and all unearned income is subjected to very heavy taxation.

Pricing System. Under the free-enterprise, competitive and individualistic system, the pricing system automatically solves the major economic problems. Some economists, however, notably Mrs. Hayek and Robbins, are of the opinion that rational accounting is impossible under a socialist regime and that it is all groping in the dark. But there are other economists like Pigou who do not see any difficulty in this. Dickenson, too, is of the opinion that the capitalist apparatus of marketing and pricing can be retained in socialism. Russians have been able to fix prices of the goods. Costs of raw materials and wages, transport and all other costs are added and then a small percentage for a little profit. This gives a selling price. It is a little arbitrary. The prices do not reflect the intensities of consumers' demands, although some note is taken of the relative scarcities. But, as in a capitalist society, prices of goods will be low enough to clear the available supplies and also high enough to cover the socially necessary marginal costs of production. The price under socialist planning need not be market price as under capitalism. It is purely a book-keeping or accounting price set by the planning authority.

Supply of labour and wages. There is now freedom of choice of occupation. There are also ample facilities for technical training. The Government is prepared to bear the cost of training on the condition that the trainees, after completing training, work in government factories for a term of years on conditions settled beforehand. Money wages are paid and there are variations according to ability, efficiency and the nature of work. Standard wages are fixed after a thorough motion-study and time-study in order to ascertain the standard time required for a job. Efficiency premia are paid to better workers who take less time. Wages are also supplemented by the payment to the workers of a lump-sum social dividend payment. This payment varies with the size, composition and health status of the family. By means of such payments, inequalities of income are mitigated. If there is a comparative shortage of some type of labour, higher wages are of course offered to attract the right type and sufficient supply of labour. Workers are assigned definite jobs. The workers could also be transferred from one place to another just like government servants. The government tries to adjust supply to demand.

Finance. The Russians had repudiated foreign debts and could not hope to secure foreign loans. They relied, therefore, mostly on created money. Paper money was issued by the State in enormous amounts. There was inflation with all the usual consequences—exorbitant prices and a very high cost of living, etc. They also raised loans from the people. Later on, income from socialised industry flowed in and helped to finance the later stages of planning.

Rent. Even a socialist State cannot do away with the concept of rent. Change of economic order from capitalism to socialism will not turn scarce land into an unlimited quantity. Rent as an index of productivity will help in the best allocation of the available land among its various uses. An accounting price-tag will have to be put on the various types of land, the good land being put a higher tag.

As Samuelson puts it, " Only by putting a price upon inert sweatless land are we using it, and sweating breathing labour, most productively ! The price or rent of land rises so as to ration its limited supply among the best uses.''[1] Even a socialist state will have to divert land from one use to another so as to make its marginal productivity in all uses the same. This marginal productivity will be indicated by rent. This is the only way to ensure a correct allocation of valuable human or non-human resources.

Interest. The Russians have not abolished interest altogether. The Government itself pays interest on State loans. Interest shows an attempt to bring the demand for, and supply of, capital into equilibrium. The banks also pay interest on personal accounts. Interest as remuneration to the capitalist, *i.e.*, payment to private owners of idle money, does not occupy an important place in Russian economy since private capital has practically disappeared. The State borrows and pays interest and appropriates the profit of industry.

What role does interest play in a socialist State ? In a capitalistic State, we know that interest performs three important functions : (1) It determines people's income from bonds and other assets ; (2) it is a necessary payment to induce people to part with liquidity ; and (3) it relates future and present economic values, *i.e.*, it helps society to decide how much of the national income should be invested in capital formation and where should the capital be used. Now the first two functions have no bearing in a socialist state. Since capital is no longer the property of private individuals, interest as an income-determining factor or as an inducement for dishoarding does not exist. But whatever the form of economy, interest must continue to perform the third function, *viz.*, to determine the allocation of the economic resources of the community as between present and future and the allocation of capital among different uses in the present.

The rate of interest acts like a sieve or a rationing device. Capital is scarce and the uses for which it is wanted are unlimited. The rate of interest is the indicator of the directions in which capital should move. Obviously enterprises with a prospective yield of 12% are to be undertaken in preference to those yielding 10%. "The rate of interest must be used to allocate scarce capital supplies optimally and to determine the order of priority of alternative projects.''

Wages. The system of setting accounting prices on labour as in the case of other productive resources will not do, for the amount of labour is not a fixed quantity. People can choose their occupation and they can also choose whether to work more or work less, *i.e.*, whether to prefer income or leisure. Hence it is essential to have a system of *actual market wages rather than accounting wages.* These rates will vary according to the agreeableness or disagreeableness of the job, possibility of supplementary earning, training or skill required to do a job, productivity of individual workers, etc. Marginal productivity will determine the wage. Thus there will be no dead level of wages in a socialist State. They will depend on the valuation that society places on the needs and worth of individual workers and the necessity for compensation to those who have to do dirty, irksome and arduous jobs. Inequality of incomes will no longer be accounted for by inequalities of property but by such factors as mentioned above.

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[1] *Economics*, 1948, p. 598.

Allocation of factors of production. The State planning authority tries to estimate the amounts of factors required for the target production in an industry and arranges for the supply. It is first decided which industries have to be developed and to what extent. The factors of production are diverted into channels set by the State and according to consumers' preferences. For example, the Russians concentrated first on heavy industries. Naturally there was a shortage of consumers' goods whose prices shot up. In a capitalistic system, factors of production would rush towards consumers' goods industries to make up for the deficiency. But a socialist State does not allow this diversion. Shortage would continue and rationing and price control introduced. In Russia the normal functioning of the price-mechanism, which brings about an optimum distribution of resources, as judged by the consumers' valuations, is nullified by State action. Thus the resources are allocated, not according to the valuation of the consumers but, according to the valuation of the State. The State decides what is best for the nation at a particular period of its life and arranges the distribution of resources accordingly. The consumers must adjust their demands according to production and the exigencies of the State.

20. Welfare State. The idea of 'Welfare State' has become very much current in recent times. All modern States aim at becoming welfare States. But what it exactly means is not very clear and definite. Consequently, welfare programmes differ in different countries.

The term 'welfare state' is used roughly to describe a society which possesses all or some of the following characteristics :—

(*i*) An all-embracing scheme of social security against normal risks and hazards of life such as accidents, sickness, unemployment, old age, etc.

(*ii*) Provision of a number of free services by the State such as free primary education, free medical aid. etc.

(*iii*) The maintenance of full employment for the working force of the country whatever the cost may be ; the state takes the responsibility of providing jobs for all able-bodied workers willing to work.

(*iv*) Fair degree of equality of incomes and opportunity for all citizens based upon redistribution of taxation and beneficent public expenditure ; and

(*v*) Finally the public ownership of utility services and basic industries.

Modern states have taken several steps towards the goal of welfare state. For instance, government social services have been evolved out of voluntary social services. The poor law services which were meant for the poor have been converted into specialised services based on common citizenship. The principles of mutual insurance have been adopted by the state and schemes of social insurance covering old age, sickness, unemployment, etc., have been introduced. The state has taken over from the local bodies such services as are vital to the well-being of the citizens. The state has become a provider of social services, a helper of social welfare activities and an agency for administering welfare departments to achieve social security on a national scale.

The term 'social service' is broadly defined as the provisions made by the government or voluntary agencies for maintenance of incomes, medical care, housing, recreational needs, care and protection of under-privileged groups. The term 'social welfare' denotes the well-being of society which means in term the well-being of the individuals, the families and communities comprising the society. It indicates the objectives of a long line of movement moulded by religious, humanitarian and democratic considerations. It is identified with the improvement of the conditions of life physically, mentally, emotionally, economically and politically of socially handicapped individuals or otherwise disadvantaged individuals or groups. The social welfare programme generally covers items like family allowance, marriage grants, birth premiums, food rebates, school meals, grants and loans for purchasing houses and furniture, provision of clothes, educational grants, medical aid, holiday allowances, free vacation, transportation, women's and children's welfare, etc. The ultimate aim is to provide social security for all which includes social assistance in some free services and social insurance *i.e.*, some benefits on a contributory basis.

Among the economic advantages of the welfare state may be mentioned equality, social security, rights to services beyond one's income, economic democracy, full employment, and so on. There are political advantages too *e.g.*, social contentment and dignity of the individual. The concept of welfare state is morally advantageous also.

Is India a welfare state ? The idea of social welfare is not new to India. Ancient Indian kings like Asoka and the medieval monarchs like Ferozeshah Tughlak, Sher Shah Suri and Akbar kept public welfare as their motto. The British rulers tried to bring about social reforms through legislation and administrative measures. But the state was at best only a silent spectator until the social reformers had paved the way. The start was made when All-India Social Conference was held in 1890.

In recent times, Mahatma Gandhi took a leading part in social welfare work. Some important landmarks are the establishment of All-India Women's Conference in 1926, the setting up of Kasturba Trust, Tata Institute of Social Sciences in 1936, Indian Conference of Social Work in 1947, All-India Village Industries Association, Harijan Sevak Sangh and the Central Social Welfare Board in 1957.

The Indian Constitution is based on the idea of welfare state. As laid down in the preamble, the Sovereign Democratic Republic of India seeks to secure to all its citizens :

(*i*) *Justice*, social, economic and political ;

(*ii*) *Liberty* of thought, expression, belief, faith and worship ;

(*iii*) *Equality* of status and opportunity ; and to promote among them all ;

(*iv*) *Fraternity* assuring the dignity of the individual and the unity of the nation.

In the directive principles of state policy, it has been laid down that the state shall strive to promote the welfare of the people by securing and protecting as effectively as it may be a social order in which justice, social, economic and political shall dominate all the institutions of the national life. The state shall, in particular, direct its policy towards securing

(*a*) that the citizens, men and women equally, have the right to an adequate means of livelihood ;

(*b*) that the ownership and control of the material resources of the community are so distributed as best to subserve the common good ;

(*c*) that the operation of the economic system does not result in the concentration of wealth and means of production to the common detriment ;

(*d*) that there is equal pay for equal work for both men and women ;

(*e*) that the health and strength of workers, men and women, and the tender age of children are not abused and that citizens are not forced by economic necessity to enter avocations unsuited to their age and strength ; and

(*f*) that childhood and youth are protected against exploitation and against moral and material abandonment.

The Planning Commission in India was appointed in 1950 The Commission is striving to achieve the goal of welfare state in India. In the objectives and approach of the First Five-Year Plan, it is laid down that social justice and reduction of inequalities are the main objectives of the Plan. The Plan embraces all aspects of national life. The chapter on social services indicates the steps that are to be taken towards the achievement of the good of the welfare state

A very comprehensive social service programme is being carried on in India by government departments and voluntary agencies like the Bharat Sevak Samaj. The programme covers youth welfare, women's welfare. group or community welfare, services for the handicapped, services for the maladjusted or unadjusted, services for the backward and under privileged groups.

India is thus marching on the road to the goal of welfare state. The pace will, of course, depend on our own resources as well as the aid that we can enlist from abroad.

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Appendix

GUIDE TO THE STUDY OF ECONOMIC THEORY

For Beginners :

Croome, H. and King, G.—*The Livelihood of Man.*
Croome, H.—*Approach to Economics.*
Dane—*Economics for Boys and Girls.*
Dewett, Varma and Singh—*Introductory Economics*, Part I (*Theory*).
Hague and Stonier—*Essentials of Economics.*

For Degree Students :

Hicks, J.R.—*The Social Framework* (2nd edn.)
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Albert Meyers—*Elements of Modern Economics*
Stonier and Hague—*A Textbook of Economic Theory.*
Tarshis, L.—*The Elements of Economics*

For Advanced Study

Traditional Economics

Marshall, A.—*Principles of Economics.*
Henderson—*Supply and Demand.*
Wicksteed—*Commonsense of Political Economy.*
Wicksell—*Lectures on Political Economy.*
Pigou—*Economics of Welfare.*
Meade—*Economic Analysis and Policy.*

The books on Traditional Economics are mainly concerned with the analysis of what has been called the market system relating to a stationary state, an abstract and an imaginary world. It covers the theory of consumption, theory of production and theory of distribution. In each component part it seeks to discover a position of equilibrium under certain theoretical assumptions relating to competition and state of resources, etc. As a result of the inter-action of the forces operating in these parts, mutual relation of demand, supply and price, there emerges the theory of value. How the price system should function so as to maximise economic welfare is discussed in the last two books in the above list, *viz.*, Pigou's *Economics of Welfare* and Meade's *Economic Analysis and Policy.*

New Economics

New Economics, as Keynesian Economics is called, questions the basic validity of Traditional Economics and represents a new approach. The discussion approximates more to the world of reality than to that of abstraction. Keynes's *General Theory of Employment, Interest and Money* gives the new analysis. Beginners in Keynesian *Economics* can study with advantage Joan Robinson's *Introduction to the Theory of Employment*, Oxford Institute of Statistics: *Economics of Full Employment*, Meade's *Economic Analysis and Policy*, and *Planning and the Price-Mechanism.* and Morgan's *Conquest of Unemployment.* D. Dillard's *Economics of M. Keynes* and A. H. Hansen's *Guide to Keynes* will greatly facilitate the understanding of Keynes's *General Theory of Employment, Interest and Money.* The various aspects of Keynesian Economics have been discussed in the book entitled *New Economics* edited by S E. Harris

Simultaneously with the revolt against Traditional Economics, there has been serious questioning of the old ideas on the nature and scope of the subject. For this discussion Robbins's *Nature and Significance of Economic Science* and Wooton's *Lament for Economics* may be consulted

The following books are recommended on advanced economic theory in its recent developments -

Hess and Others--*Outside Readings in Economics*
Robinson, E A.G - *Monopoly.*
Joan Robinson—*Economics of Imperfect Competition*
Chamberlin—*Theory of Monopolistic Competition*
Hicks—*Value and Capital*
Hicks—*Revision of Demand Theory*
Hayek—*The Pure Theory of Capital*
Stigler—*Production and Distribution Theories*
—*Theory of Price* (2nd edition).
Tugwell- *Trend of Economics*
Boulding—*Economic Analysis* (3rd edition)
Hansen— *Monetary and Fiscal Policy*
Ellis H.S (ed)—*A Survey of Contemporary Economics* Vol. I.
Haley, B F. (ed.) - *A Survey of Contemporary Economics*. Vol 2.
American Economic Association's ***Readings*** series.

For excursions beyond the Keynesian field, with the same fundamental approach nevertheless the following books may be suggested :

Joan Robinson—*Essay in Theory of Employment*
—*Essay on Marxian Economics*
M. Kalecki—*Theory of Economic Dynamics.*
W. J Baumol—*Economic Dynamics—An Introduction.*

The student of advanced economic theory will find important contributions in periodical literature. In this connection we may recommend :

1. *The Economic Journal* (Royal Economic Society, London).
2. *Economico* (London School of Economics).
3. *Review of Economic Studies*, Cambridge
4. *Oxford Economic Papers*, New Series.
5. *Quarterly Journal of Economics* (Department of Economics, Harvard University).
6. *Review of Economics and Statics* (Do).
7. *Journal of Political Economy* (Department of Economics, University of Chicago)
8. *American Economic Review* (American Economic Association).
9. *Econometrica* (Econometric Society, Chicago)

TYPICAL QUESTIONS

(Answers to most of these questions can be found in *Refresher Course in Economic Theory* by the same author).

Introduction

1. Economics has been defined as a science of wealth. Is this definition adequate or appropriate ? Give reasons.

2. "Economics is study of man's actions in the ordinary business of life." Discuss. (C. U. 1934, 1940 ; Bom. 1942 ; All. 1943)

3. Explain and comment on the following :--" Economics is the science which studies human behaviour as a relationship between ends and scarce means which have alternative uses." (P.U. 1953 Suppl.)

4. "Whatever Economics is concerned with, it is not concerned with the causes of material welfare." (Robbins). Discuss. (Delhi Univ. B.H.—1951)

5. "Economics deals with means ; the study of ends lies outside its scope." (P.U. 1939)

6. " Economics is neutral between ends as such." Discuss the validity of this statement in a Welfare State. (Bom. 1955)

7. " The role of the Economist is more conceived of as that of the expert who can say what consequences are likely to follow certain actions, but who canno judge, as an Economist, the desirability of these actions." Discuss. (P.U. 1941)

8. "The function of the Economist is, therefore, to explore and to explain, not to uphold or to condemn." Comment.

9. "The study of Economics does not furnish a body of settled conclusions immediately applicable to policy ; it is a method rather than a doctrine, an apparatus of the mind, a technique of thinking, which helps its possessor to draw correct conclusions." Comment.

10. " The object of economic analysis is not merely to discover the truth but also to assist in the solution of concrete problems." Comment. (Delhi 1956)

11. What is meant by economic theory ? Point out the relation between economic theory and economic policy. (P.U. 1959)

12. What is an Economic Law ? Examine in this connection the statement that " the laws of Economics are to be compared with the laws of tides rather than with the simple and exact law of gravitation."
(P.U. 1930 ; Agra 1939 ; C.U. 1926 ; Delhi 1934 ; Madras 1936 ; Patna 1945)

13. Discuss critically the nature of the Laws of Economics. To what extent can you interfere with their working to social advantage ? (C.U. 1953)

14. Explain briefly the method most suited to economic investigation. (Osmania 1959 ; P.U. 1937 ; Agra 1937 ; C.U. 1935)

15. What is Economics ? Consider its relation to other social sciences. (C.U. 1917, 1939 ; P.U. 1940)

16. Define Wealth and discuss the relation between Wealth and Welfare.

17. What is economic welfare ? To what extent can the study of economi . help in the advancement of economic welfare ? (P.U. 1956 ; Delhi 1952)

18. Distinguish between wealth and welfare. How far is it correct to say that the study of Economics helps in promoting welfare ? (Delhi 1957)

19. Comment on the statement that welfare economics ought to be considered as an integral part of economic theory. (Madras 1950)

Consumption

1. Reconcile the following statements :—

(*i*) Consumption is the end of all economic activity.

(*ii*) Human wants are the standing point of all economic activity.

2. Explain the Law of Satiability of Want. Yet how are wants insatiable ? (P.U. 1949)

3. Define Marginal Utility. Show the relation of marginal utility to total utility. Give an example and a diagram. (Rajasthan 1959)

4. Define the Law of Diminishing Utility and explain carefully the relation it bears to the principles of taxation. (P.U. 1933)

Or

Estimate its importance in shaping the theory and practice of modern taxation. (P.U. 1939)

5. What is utility ? Show that the total utility is maximum when marginal utility is zero.

6. Explain the principle of maximum satisfaction and show how it determines our scheme of expenditure. (P.U. 1942 ; C.U. 1923)

7. "The applications of the principle of substitution extend over almost every field of economic inquiry." (Marshall). Explain this statement fully. (Agra 1953, 1955)

8. Examine the principle of Substitution as applied to industry. (P.U. 1949)

9. Explain the principle of diminishing marginal rate of substitution and discuss how far it is an improvement on the concept of diminishing marginal utility. (Madras 1951 ; P.U. 1956)

10. Explain the concept of consumer's surplus and illustrate its use in economic analysis. (P.U. 1953)

11. Explain fully the concept of consumer's surplus. Explain its importance. On what grounds has it been criticised ? (Allahabad 1953)

12. What are the assumptions underlying the concept of consumer's surplus ? Discuss the uses of the concepts in Welfare Economics. (Delhi, B.H. 1951)

13. What is consumer's surplus ? Show how it is related to individual demand price and market price. (Gauhati 1958 ; C U. 1951, 1954)

14. Discuss the utility of the concept of consumer's surplus both as an explanation of economic phenomenon and as a guide to economic policy. (C.U. B.A. Hons. 1946)

15. Explain clearly the concept of consumer's surplus. How far is it possible to measure this surplus in terms of money ? What is the practical use of this doctrine ? (P.U. 1955)

16. Explain the significance of the 'price consumption curve' and the 'income consumption curve'. Under what conditions does the price consumption curve represent a demand curve ? (Bombay 1957)

Demand

1. State the Law of Demand. Discuss the relationship between the Law of Diminishing Utility and the Law of Demand. (C.U. 1934 ; Agra 1932 ; All. 1940)

2. Discuss the characteristics of consumer's demand. Can any laws be formulated ? Explain. (P.U. 1948 ; Nagpur 1952)

3. Illustrate the law of demand by a suitable schedule of demand and prices. Show how you can actually find out elasticity of demand from this schedule. (C.U. 1953 ; Nag. 1935 ; Pat. 1945 ; Pun. 1945)

4. Enumerate the factors which lead to the increase of demand for a commodity. Show how an increase of demand may be represented diagrammatically. (P. U. 1951 Suppl.)

5. Why does a consumer buy only a definite amount of a commodity at a given market price and neither more nor less ? (C.U. 1950)

6. What is the nature of the demand curve for the product of an individual firm under full and free competition ? (P.U. 1952 ; Delhi 1955)

7. Write a note on the nature of demand for a factor of production. (P.U. 1951 Suppl.)

8. How would you explain the demand of a consumer in terms of his preference ? Is this explanation an improvement upon that in terms of utilities ? (C.U. B.A. Hons. 1951)

9. 'Economic analysis in terms of utility is yielding place to the scale of preference.' Elucidate. (Madras 1949)

10. "Explain Elasticity of Demand. Carefully indicate qualifying assumption. (P. U. 1950)

11. " The distinction between elastic and inelastic demand is a matter of degree." Explain and illustrate. What circumstances are likely to make demand elastic ? (Patna 1953)

12. What is elasticity of demand ? How will you measure it ? Illustrate how elasticity of demand varies for different incomes and different ranges of prices. (Delhi 1953 ; P.U. 1955)

13. Consider the effect of elasticity of demand on : (*a*) Taxation, and (*b*) monopoly profits. (C.U. 1936)

14. State the circumstances in which a demand curve throughout its length represents unit elasticity. (P.U. 1952)

15. Explain the concept of elasticity of demand What is its importance in analytical and applied Economics ? (Patna 1955)

16. Point out the importance of elasticity of demand and of supply in the determination of international value. (P.U. 1951 Supp.)

17. Show that (*a*) the law of demand states a (qualitative) relation between the prices prevailing in market and the amount demanded at each price ; and

(*b*) The elasticity of demand expresses a (quantitative) relation between the *change* in price and the corresponding *change* in the amount of demand. (C.U 1952)

18. Explain the concept of elasticity of demand, and give a technique of measuring this elasticity

19. Take a falling straight line demand curve. Demonstrate how the elasticity of demand at a lower point on the curve is less than the elasticity of demand at a higher point (Delhi 1951)

20. Enunciate the Law of Diminishing Utility bringing out the distinction between total utility and Marginal Utility. Also explain how the law is related to ; (*a*) The Law of Demand. (*b*) Elasticity of Demand. (*c*) The Law of Equi-Marginal Utility. Explain the relation between Elasticity of Demand and Consumer's surplus.

21. Write short notes on any three of the following :--

(*a*) Joint Demand. (*b*) Standard of Living. (*c*) Engel's Law (*d*) Consumer's indifference.

22. Describe the properties and usefulness of indifference curves. (Delhi 1959)

23. What are indifference curves ? How are they used for explaining consumer's behaviour in allocating a given money income. (Delhi 1953 ; P.U. 1955 Suppl.)

24. What are 'indifference curves' ? Explain consumer's Equilibrium with the help of indifference curves. (Delhi 1956)

25. Explain with diagrams the concept of indifference curves. How far is it an improvement over the utility concept ? (Patna 1953 ; J & K. 1955)

26. Explain the concept of indifference curves and assess its place in the theory of value. (Madras 1953)

27. Derive the law of consumer's demand by means of indifference curves. (Bombay 1954)

28. Evaluate the relative significance of utility and scales of preferences in the pure theory of consumer's demand. How far is the relative technique of indifference curves useful in this analysis ?

29. What are the essential elements of Marshall's theory of demand. How is the indifference curve approach different from the above ?

30. What do you understand by Consumer's sovereignty ? How far is it real and what are its functions ? (P.U. 1958)

31. What is meant by consumer's sovereignty ? Discuss its bearing on economic activity. (P.U. 1957 Suppl.)

32. Discuss the income and substitution effects of (*i*) a change in money income, and (*ii*) a change in the price of a commodity on consumer's demand for the commodity. (Agra 1956)

Production

General

1. "Production is the creation of utilities." Comment.

2. What is production ? What influences govern its volume ? Discuss the significance of the volume of production.

3. Indicate the criticism to which the traditional classification of the factors is subjected.

Land

1. In economic discussion land is usually distinguished from capital. How far, in your opinion, is the distinction valid ? (P.U. 1951 Suppl.)

2. Explain the Law of Diminishing Returns both with special reference to agriculture and as a general law applicable to all industries. (P.U. 1937)

3. State and explain fully with the help of diagrams the law of diminishing returns. How far is it correct to say that it does not apply to industries ? (Agra 1953)

4. State the Law of Diminishing Returns with its limitations. (C.U. 1937 ; Agra 1937 ; All. 1934 ; Delhi 1936 ; Mad. 1937 ; Nag. 1941 ; Pun. 1937)

5. Examine the significance of the Law of Diminishing Returns and indicate its bearing on (*i*) the Malthusian Theory of Population, and (*ii*) the Theory of Rent.

6. Does the Law of Diminishing Returns apply also to factors other than land. Explain fully.

7. Explain the Law of Diminishing Returns and show how is it a statement relating to the limitation of substitution of one factor of production for another ? (P.U. 1951)

Labour

1. Define Labour. Distinguish between productive and unproductive labour.

2. What are the peculiarities of labour as a factor of production ?

3. In what manner does the supply of labour differ from the supply of commodities ? How is the difference, if any, of significance ? (P.U. 1959)

4. "Malthusian theory of population is pessimistic and the Optimum theory of population is optimistic, but none of these is an adequate theory of population." Discuss. (Patna 1953)

5. Examine the Optimum theory of population. How far is this theory an improvement on Malthus's theory of population ? (Delhi 1956 ; P.U. 1954)

Define over-population and under-population in the light of the Optimum Theory. (Banaras 1938; Dacca 1942, 1943)

6. What is optimum population ? What tests would you suggest to measure any deviation from the same ? (Madras 1948)

7. "The problem of population is not one of mere size in relation to food supply but of efficient production and equitable distribution." Discuss.

8. What are the factors that affect the efficiency of labour and what method do you consider best to measure it ?
(P.U. 1938 ; C.U. 1939 ; Agra 1940 ; Nag. 1942)

9. Examine the conditions that promote efficiency of Labour.
(P.U. 1948 ; Nag. 1952)

10. What is meant by Division of Labour ? Briefly discuss its advantages and disadvantages. (P.U. 1939 ; C.U. 1930 ; All. 1939)

11. Point out the relation between division of labour and extent of the market.
(P.U. 1953 Suppl.)

12. "Of all sorts of luggage man is the most difficult to be transported." Discuss with special reference to India. Discuss the factors which in recent years have increased the mobility of labour.

13. Discuss the causes that hinder the mobility of labour. Would there be difference in wages if there were perfect mobility of labour.
(C.U. B.A. Hons., 1946)

14. Examine the nature and significane of industrial location. Give suitable illustrations. (Agra 1956)

15. What are the factors governing the location of industries ? What role should the State play in determining the locational pattern of industries ?
(Poona 1957)

16. "Capital and labour have lost the power they once had to attract raw materials, these now attract labour and capital." Examine how far this explains the prevailing location of industries in India.

Capital

1. Define capital and briefly discuss the functions it performs in production.
(C.U. 1924, 1926)

2. "Land is capital." Discuss.

3. " In the short run Labour and Capital are competitive ; in the long run they are complementary." Discuss the statement. (C.U. 1932)

4. What do you understand by capitalistic production ? What are its advantages ? Is capitalistic production associated with capitalism only ?
(Delhi 1952)

5. Analyse the forces governing the formation of capital in a capitalist society. Indicate the assistance the State can render to accelerate the growth of capital in the country. (Delhi 1959 ; P.U. 1959)

Or

Discuss the factors on which accumulation of capital depends in (*a*) industrialised countries, and (*b*) under-developed countries. (Delhi 1957)

6. Discuss the economic effects of the introduction of machinery. Does machinery create unemployment ? Give reasons. (Agra 1955)

7. What is meant by mobility of capital ? How far can capital be said to be mobile in India ?

8. What do you understand by the term 'Industry' ? Explain the meaning and importance of 'Labour-intensive' industries in a country faced with large-scale unemployment. (Agra 1956)

Forms of Organisation

1. Analyse the functions of the entrepreneur and show what light this analysis throws on the nature of profit. (C.U. B.A. Hons., 1946)

2. How far have the functions of the entrepreneur been delegated in modern time ?

3. What is the nature of the services performed by the entrepreneur and how is he rewarded ? (C.U. 1943)

4. Describe the evolution of the functions of an entrepreneur. How far does the manager in contemporary business organisation discharge entrepreneurial functions ? (Madras 1947)

5. Indicate the characteristic features of a joint stock company and compare it with partnership.

6. Account for emergence of combinations in industry. Do they make for industrial stability ? (C.U., B.A. Hons. 1951)

7. Consider the difficulties in the way of the maintenance of industrial combinations.

8. Outline the principal forces that promote the growth of monopoly ? To what extent is the Indian industry monopolistic ? (Madras 1953)

9. Discuss the factors that give rise to monopoly. Does monopoly create economic welfare ? (Bombay 1957)

Examine the various factors that have militated against it in India. (Agra 1958)

10. Discuss the various forms of combinations among producers. Are such combinations necessarily injurious to society ? (C.U. 1927)

11. What are Trusts and Cartels ? Examine their merits and demerits. (C.U. 1945)

12. Explain with illustrations what is meant by (a) Vertical combination, (b) Horizontal combination.

13. What is a Holding Company ? Discuss its merits and demerits.

14. Discuss the contention that monopoly retards rather than promotes efficiency. Give reasons for your views. (P.U. 1949)

15. What do you understand by monopoly ? What difficulties are encountered in its formation ?

16. Why and how does the state exercise control over monopolies ? (Patna 1953)

17. Discuss the courses open to the State to neutralize the disadvantages of monopolistic conditions. (Madras 1953)

18. Compare a joint stock concern and a co-operative store as types of business organisation.

19. Discuss the fundamental principles underlying co-operation, and show how it avoids the drawbacks of both capitalism and socialism.

20. Account for the increasing scope of State undertakings and indicate their advantages and drawbacks.

21. How far is it desirable to extend State ownership of industries as a means of securing additional public revenues ? (C.U., B.A. Hons. 1946)

Scale of Production and Laws of Return

1. Explain the origin of rationalisation and indicate its main features.

2. What is rationalisation ? How far does it result in unemployment ? (Bombay 1955)

3. Give the main features of modern industrial organisation.

4. What do you understand by the Scale of Production ? Indicate the factors that lead to variations in the scale of production. (P.U. 1936)

Or

Indicate the factors that determine the size of industrial units in a community. (P.U. 1938)

5. Explain what is meant by internal and external economies, and consider the part played by them in bringing about increasing returns. (P.U. 1956 Suppl.)

6. Do you agree with the view that internal and external economies are mere analytical devices and do not correspond to practical realities ? (Bombay 1957)

7. "The growth of a firm must be considered biologically and not mechanically. What is optimum and what is sub-optimum depends on the industrial environment."

Explain the statement and consider its implications for the policy of nationalisation. (C.U., B.A. Hons. 1952)

8. What are the organisational factors which tend to increase the size of a firm in any industry ? Would differentiation of products and processes reverse this tendency ? (Patna 1955)

9. Why are modern industries organised on a large scale ? Indicate the limitations of large-scale production and explain in this connection the concept of the optimum firm.

10. Discuss the relative importance of large-scale production and small-scale production. Under what conditions would both scales of production continue in any given industry ? (Rajasthan 1959)

11. Account for the survival of small-scale business units in spite of general trend towards mass production. (Delhi 1953 ; P. U. 1956)

12. Explain the economics of cottage industry. Mention the factors that can promote its efficiency. (P. U. 1950)

13. "The operation of the law of diminishing returns is due to the scarcity of the factors of production." Discuss. (Agra 1956)

14. "The part played by Nature conforms to Diminishing Returns while the part which Man plays conforms to Increasing Returns." Discuss. (Agra 1955)

15. What is the significance of the Law of Increasing Return and of Diminishing Return from the point of view of price fixation and economic development? (Madras 1955)

16. "The law of diminishing return is merely a matter of logical necessity, but the lew of increasing return is one of empirical fact." (*Robbins*). Discuss. (Madras 1954)

17. Explain the concept of increasing returns with reference to (*a*) the firm and (*b*) the industry. (P.U. 1959)

18. Account for the operation of the Law of Diminishing Returns in Indian agriculture, and say how it can be counteracted.

19. "The Law of Diminishing Returns is the only one phase of the universal law of variable proportions." Explain.
(C.U. B. Com. 1942 ; Nag. 1943 : Dacca 1943)

20. "Labour and capital cannot be withdrawn from a part of the land and centralised on the rest without causing a reduction in social income " Bring out the significance of this statement. (C.U. 1945 ; Gauhati 1958)

21. Explain the law of increasing returns. Do increasing returns necessarily lead to monopoly ? (Delhi 1959)

Or

How far are increasing returns compatible with competition ? (Bombay 1957)

22. Enunciate the Lav of Constant Returns and indicate the cases where it operates.

23. Distinguish between Optimum Firm and Representative Firm. How does the optimum unit differ as between manufacturing industry and organisation. (Bombay 1953)

24. What is an Optimum firm ? What devices are usually adopted for reconciling the different optima ? (Bombay 1954)

25. Discuss the causes of localisation of industries, and account for the present day tendency towards decentralisation. (P.U. 1939)

26. Why does an industry once started in a particular place tend to remain there ?

27. State the conditions of optimum combination of the factors of production. (Madras 1953)

28. How are the productive resources allocated to various industries under capitalism ? Is the allocation ideal from the social point of view ? (Patna 1953)

29. How far is the modern economic system adaptable?

Exchange

Markets

1. Discuss the attributes of (*a*) a perfect market, (*b*) pure competition, and (*c*) pure monopoly. (Patna 1953)

2. What are the assumptions of perfect competition ? How far is the theory of value derived from the above assumptions realistic ? (Madras 1955)

3. Enumerate the factors which hinder the operation of free competition in a market. (P.U. 1952)

4. What are the essential factors of a competitive market ? Explain the relationship between demand, supply and price in such a market. (Patna 1953)

5. Define a market and discuss the factors which determine its size for different commodities. (P.U. 1940 ; C.U. 1920)

What would you expect to be the size of the market in bricks, vegetables and precious metals ?

6. How would you distinguish between a perfect market and an imperfect one ? What are the conditions of a perfect market ?

7. What are the functions of a Stock Exchange ? How does it facilitate the financing of industries ? (P.U. 1934 ; C.U. 1930)

8. Describe the working of either stock exchange or produce exchange with which you may be familiar. (P.U. 1943)

9. Write short notes on any three of the following : (*a*) Contango ; (*b*) Futures ; (*c*) Produce Exchange ; (*d*) Rigging ; (*e*) Opportunity Costs ; (*f*) Imperfect competition ; and (*g*) Hedging.

10. Distinguish between legitimate and illegitimate speculation. Explain the economic consequences of the latter. (P.U. 1933, 1937)

How would you suppress illegitimate speculation ? (P.U. 1937)

11. What is the economic role of speculation ? What are its abuses, and how would you deal with them ?

12. Discuss the part played by constructive speculation in modern economic organisation. (Madras 1952)

Price Under Competition

1. What are the conditions under which price control may be justified ? Explain how the operation of the laws of demand and supply is modified under a system of price control. (Gauhati B. Com. 1957)

2. Distinguish between the market price and the normal price. Point out the dominant influences that determine them. (C.U. 1951, 1954)

3. Explain the meaning of supply in the context of analysis of (*a*) market value, (*b*) normal value. (P.U. 1952 Suppl.)

4. Discuss the concept of equilibrium price. Indicate briefly the kinds of equilibrium in value formation. (Patna 1955)

5. Discuss briefly the problem of competitive price under conditions of decreasing return. (C.U. 1946)

6. Show how competitive prices are determined under conditions of decreasing costs.

7. "The state of decreasing costs is in fact an unstable one." Discuss the statement. (C.U. 1953)

8. Show how in perfectly competitive equilibrium the price of a commodity is equal to its marginal and average cost of production. Illustrate your answer diagrammatically. (Delhi 1952)

9. Distinguish between market price and normal price. Explain how normal price is determined in the long period in a competitive market. (Agra 1954)

10. Distinguish between market supply, short period supply and long-period supply. What is the nature and significance of the reservation price in respect of market supply? (Bombay 1955)

11. Classify the problem of value from the point of view of time, noting carefully the interpretation which you put on 'demand' and 'supply' in each case. (C.U., B.A. Hons 1946)

12. Discuss the importance of time element in the determination of value of a commodity. (Agra 1955; Delhi 1957)

13. Indicate how the problem of value is influenced by short and long term considerations. Illustrate. (P.U. 1949)

14. A rise in demand may lead to fall in price. How do you explain the paradox?

15. Briefly explain the theory of short-period normal value, and indicate how the problem of quasi rent arises in the analysis of short-period normal value.

16. Discuss the relationship between 'marginal cost' and 'price' under (*a*) perfect competition and (*b*) imperfect competition. (Delhi 1958)

17. "Ricardo and his followers maintain that the value of a commodity is fixed by its cost of production; while Jevons and those who agree with him contend that value is determined by its marginal utility." Which of these two views is correct? (C.U. 1935)

18. "Cost of production, eagerness of demand, margin of production and price of the produce mutually govern one another." Explain. (Allahabad 1953; Patna 1954)

19. What do you understand by the term 'cost of production'? Distinguish between Prime Costs and Supplementary Costs and examine the bearing of this distinction on the theory of value. (Punj. 1945; All. 1935; Delhi 1936; Gauhati 1958)

20. Show the cost curve of a firm under competition. (Delhi 1951)

21. Distinguish between average and marginal costs. Explain the relation of each to normal value under (*a*) perfect competition and (*b*) monopoly. (Gauhati B. Com. 1957)

22. Distinguish between Prime Costs, Supplementary Costs, and total cost. Is the distinction valid for the long period? (C.U. 1930)

23. On what principles is the division between prime costs and supplementary costs based? (Agra 1953)

24. Distinguish between production costs and selling costs. Does advertising necessarily raise the price of the product? (Bombay 1955)

25. "One can safely make the generalisation that the long-run average cost curves of a firm will normally be U-shaped as short-run ones will, but they will invariably be flatter than short-run ones will." Examine this statement. (C.U., B.A. Hons. 1955)

26. "Marginal uses do not govern value, but are governed together with value by the conditions of demand in relation to supply." Elucidate. (All. 1933; Ban. 1939)

27. Examine the relation between cost of production and price in the long run. Illustrate your answer with diagrams. (Delhi 1959)

28. "Water is more useful than gold, and yet gold has greater value." How do you explain the paradox ? (Agra 1955 ; C.U. 1937 ; Pat. 1940)

29. Explain the concept of Opportunity Cost and discuss its bearing on the problem of relative values.

30. Analyse costs of production so as to bring out the meaning and significance of opportunity costs. (Agra 1956)

31. "The concept of costs in modern economic theory is a concept of displaced alternatives." Discuss. (Madras 1949)

32. Discuss the part played by selling costs and advertisement outlay in the analysis of value. (Madras 1952)

33. Discuss the average and marginal cost of an individual firm under conditions of increasing, constant and diminishing returns. Which of these costs is decisive in the determination of supply price ?

34. Explain the marginal theory of value and show why it is necessary to study the behaviour of demand and supply at the margin.

35. Discuss the importance of marginal concept in modern economic analysis. (Agra 1956)

36. Describe the working and point out the implications of the price mechanism in a competitive capitalist economy. (P.U. 1953)

37. Distinguish between a Marginal Firm and a 'Representative Firm'. Which of these do you think, and why is more important in price determination in practical life ? (P.U. 1938)

38. Explain Marshall's concept of Representative Firm and discuss its use in the determination of value. (Delhi, B.H. 1951)

39. Analyse carefully the conditions of equilibrium of the individual firm under perfect competition both in the short and long periods. (C.U. Hons. 1955)

40. What use in the economic analysis is the Representative, Optimum and Equilibrium firm ? (Madras 1956)

Monopoly Price

1. What are the considerations that a monopolist must bear in mind in fixing the price of his commodity ? Is monopoly price necessarily higher than the price under competition ? (All. 1953)

Or

Discuss briefly the principles governing the determination of value under monopoly conditions. (Delhi 1959)

2. Explain the factors which determine price under simple monopoly. Use a diagram to illustrate your answer. (Delhi 1951)

3. Indicate the methods and objects of Price Discrimination under monopoly. (P.U. 1939)

4. Give some characteristic examples of price discrimination under monopoly. Under what conditions is price discrimination possible, profitable and socially desirable ? (Bombay 1953)

Examine the effect of such discrimination on consumer's surplus.

5. Distinguish between simple monopoly price and discriminating monopoly price. How is the former determined ? (Delhi 1952)

6. Both the monopolist and the competitive producer aim at maximising their net gain. Show how they achieve their objective. (P.U. 1952)

7. Show how monopoly price is affected by (*i*) elasticity of demand, (*ii*) substitutes, (*iii*) potential competition, (*iv*) regard for future demand, and (*v*) risk of legal interference.

8. How far is monopoly detrimental to the consumer ? Indicate the restraining influences to which a monopolist is subject.

9. Compare price and output policies under monopoly and perfect competition? (Osmania 1958)

10. Distinguish between Monopoly and Monopolistic Competition. How is price determined under monopoly ? (Bom. 1955)

How is price determined under monopolistic competition ? (Bom. 1954)

11. How would you determine the market price of a differentiated product ? What are the peculiarities of such a price ? (Agra 1956)

12. What is meant by product differentiation ? Explain its influence on the determination of value ? (Madras 1950)

13. Discuss the effects of (*a*) imperfect competition among sellers on products and consumer satisfaction and (*b*) imperfect competition among employers on rate of wages.

How is value of a commodity determined under imperfect competition ? What will be the effects of introducing free competition ? (Rajasthan 1959)

14. Bring out the salient features of Imperfect Competition. How does price determination under Imperfect Competition differ from that under Perfect Competition ? (Bom. 1953)

15. The principles governing price formation under perfect competition, imperfect competition and monopoly are the same. Discuss this statement. (P.U. 1959)

Inter related Values

1. Discuss the applicability of the principle of joint cost to the case of railway rates. (C.U., B.A. Hons. 1952)

2. Explain how prices are fixed under oligopoly. (C.U. B.A. Hons. 1952)

3. Distinguish between 'joint demand' and 'composite demand.' Explain the difficulties of price determination under conditions of joint demand.

4. What is joint supply ? How is value determined under joint supply ?

5. How is the value of goods in joint-demand determined ? State the conditions under which a factor of production can permanently raise its remuneration. (C.U. 1934 ; P.U. 1945 ; All. 1942)

6. Distinguish between 'joint demand' and 'composite demand'. What are the difficulties of price determination under conditions of joint demand ? (P.U. 1958)

7. State briefly : (*a*) the relation between the prices of competing goods, (*b*) the relation between the prices of complementary goods, (*c*) the relation between the prices of joint cost goods. (C.U. 1952)

Distribution

General

1. What do you understand by the term National Income ? What features determine its size ? What difficulties are involved in its measurement ? (Bom. 1954)

2. Explain the chief influences on which the size of the social income depends. Is the size of social income sufficient to indicate the welfare of a community ? (Patna 1953)

3. "National Dividend is at once the aggregate net product of, and the sole source of payment for, all the agents of production within the country." Discuss. (Patna 1953)

4. Explain the term 'National Dividend.' Briefly discuss the principle which governs its distribution among various agents of production. (C.U. 1935 ; Agra 1912 ; Pat. 1944 and Mad. 1939)

5. "Under perfect competition the principle of substitution implies that the value of the marginal product of any factor will equal its price." Explain. (Bom. 1955)

6. Why does the marginal productivity of a factor of production diminish as more of it is employed ? In this connection show that a change in the supply of one factor reacts on the earnings of other factors. (C.U., B.A. Hons. 1951)

7. State and explain the marginal productivity theory of distribution and point out its limitations. (Delhi 1959)

8. What are the special features of the pricing of factors of production ? How does it differ from the pricing of commodities ? (Bom. 1953)

9. "Factor prices in final equilibrium must all equal marginal revenue products." Explain.

10. Do you agree with the view that the prices paid for various factors of production are only particular aspects of the general law of pricing? (J. & K. 1953)

11. Carefully explain how the National Income of a country can be estimated. (C.U. B.A. Hons. 1952)

Rent

1. What do you understand by economic rent ? Distinguish it from contract rent.

2. Is there any fundamental difference between Land and Capital ? Consider the bearing of this question on the theory of rent. (C.U. B.A. Hons. 1952)

3. 'Rent is paid for the original and indestructible power of the soil.' Explain. (C.U. 1935. 55 ; Agra 1911 ; All. 1935 ; Ban. 1938 ; Pun. 1938 ; Nag. 1943)

4. "Rent can arise only when the supply of any factor of production is less than perfectly elastic." Discuss. (Agra 1956 ; Bombay 1953)

5. Specify the conditions under which economic rent can accrue to a factor of production. (Bom. 1954)

6 State and examine the Ricardian theory of rent. (P.U. 1953 Suppl.)

7. Give some modifications made by modern economists in the theory of rent.

8. Explain Opportunity Cost. What effect, if any, does it exert on rent ? (P.U. 1939)

9 "Rent is price determined and not price determining." Explain. (Patna 1953)

10. Explain the modern theory of Rent. How far do you agree with the view that Rent is a part of cost of production ? (Delhi 1957)

11. Tradesmen often say that they have to charge high prices because they have to pay high rent. Do you agree ?

12. Explain, giving reasons, the effect on rent of (*a*) Improvement in the means of communication and transport. (*b*) Increase in population. (*c*) Improvement in methods of cultivation. (*d*) Economic progress in general.

13. "The rent of the land is not a thing by itself, but the leading species of a large genus." What does Marshall mean by this statement ? (P.U. 1933 ; Bom. 1955)

14. Write short notes on any three of the following :—

(*a*) Producer's Surplus : (*b*) Quasi-Rent ; (*c*) Transfer Earnings ; (*d*) Margin of cultivation, and (*e*) No rent land.

15. Indicate the nature of Quasi-rent. What is the theoretical and practical significance of the concept ? (Madras 1951, 54)

16. Distinguish between Rent and Quasi-Rent. Show how the two are related to transfer earnings. (P.U. 1951)

How does Quasi-Rent differ from interest ? (Allahabad 1953)

17. Would there be rent (*a*) if all lands were equally fertile ? (C.U. 1945, 1929) ; (*b*) if there were no tendency to diminishing returns ; (*c*) if the Government owned all lands ; (*d*) if the lands were cultivated by the owners ; (*e*) if the supply of better lands were practically unlimited ; and (*f*) if land revenue were abolished ? Give reasons in each case.

18. Analyse the nature of rent and indicate the position it is likely to hold under a socialistic regime. (P.U. 1938)

Wages

1. What are the peculiarities of labour in relation to demand and supply ? (P.U. 1935)

2. Distinguish between real and normal wages. What factors would you take into consideration in determining real wages ? (C.U. 1925 ; Agra 1941 ; All. 1942 ; Mad. 1937)

At present, in India, nominal wages are high, but real wages are low. Why ?

3. Briefly examine the various theories of wages. (C.U. 1924 ; Agra 1942 ; Delhi 1940 ; Pun. 1935)

4. Explain the theory of wages which appeals to you most. Discuss briefly in this connection the applicability of your theory to modern Indian conditions. (P.U. 1953)

5. State and examine the marginal productivity theory of wages. Is it correct to say that wages under pure competition are equal both to the marginal and average product of labour ? (Delhi 1951 ; P.U. 1951)

6. "Wages, at any moment are determined by the marginal productivity of labour to the entrepreneur." Discuss. (Delhi 1957)

7. Examine the adequacy of the marginal productivity theory of wages. (Madras 1954)

8. How far is it true to say that the theory of wages is an application of the general theory of value ? (C.U. 1931 ; Agra 1939 ; P.U. 1935)

9. How are wages determined ? Do wages in India always attain the same level ? Give reasons.

10. How is marginal analysis applied in the determination of wages ?

11. "The rate of wages is determined by the discounted marginal product of labour." Explain.

12. How do you explain the fact that labour in different occupations earns strikingly different rates of wages ? (C.U. 1930)

13. Why do wages differ (*i*) from occupation to occupation, and (*ii*) from country to country ?

14. The average woman earns considerably less than the average man. Why ? (P.U. 1944 ; C.U. 1918)

15. Discuss the relation between wages and employment. (Madras 1952)

16. Show the effect of a reduction of money wages on general volume of employment in a closed economy and in an open economy.

Labour Problems

1. Discuss the functions and utility of Trade Unions. (P.U. 1940)

2. Trace the influence of Trade Unions on the wage rate. Consider limitations. (P.U. 1940, 1948 ; C.U. 1936, 1938)

3. How far is it possible by trade union action to raise wages permanently (*i*) in any given occupation, and (*ii*) in all occupations ?

4. What is a Trade Union ? Can trade unions raise wages by collective bargaining in a perfectly competitive economy without adversely affecting the volume of employment ? (Agra 1956)

5. What do you mean by the 'minimum wage'? What considerations should enter in its determination? (P.U. 1937)

6. Examine the basis for the determination of minimum wages rate. Consider the limiting factors. (P.U. 1949)

7. Discuss the desirability and feasibility of (*a*) national minimum wage and (*b*) minimum wage for selected occupations.

8. What are the elements that make for the imperfection of labour market? Under what conditions would you advocate governmental interference with wage fixation? (Bom. 1953)

9. Examine the merits and demerits of the (*a*) Labour co-partnership, (*b*) Profit-sharing, and (*c*) Sliding scale of wages as means of settling differences between labour and capital. (C.U. 1944, 1947)

10. Analyse the causes of, and suggest remedies for, unemployment.

11. Distinguish between the various types of unemployment under capitalism. How far can planning remedy them? (Patna 1953)

12. What is Social Insurance? How far has India gone in providing social insurance to the factory workers?

13. Discuss the implications of a policy of Full Employment with special reference to under developed economies. (Bom. 1953)

14. What are the causes of unemployment of educated people in India? Suggest remedies to meet this problem? (Allahabad 1955)

15. What is meant by economy of high wages? Explain the statement that dear labour is really cheap labour. (C.U. 1954)

16. How does the employment problem differ in under-developed and developed economies? What is the proper employment policy for these two types of economies? (Bom. 1957)

Interest

1. Distinguish between Gross Interest and Net Interest and analyse Gross Interest into its various constituents.

2. Why does a village money lender charge 18% interest, whereas a bank charges only 6%?

3. What do you understand by Interest? How does it arise? Indicate the factors that determine the general rate of interest. (P.U. 1939)

4. Discuss: "The rate of interest is the price of money and is determined by the supply of money and demand for it." (Agra 1959)

5. Why is interest paid? Do you think that the complete abolition of interest payment would cause all savings to cease? (P.U. 1942)

6. Write short notes on:

(*a*) Liquidity Preference, (*b*) Forced Savings.

7. Explain the concept of 'liquidity preference''. What part does liquidity preference play in the determination of the rate of interest? (P.U. 1952)

8. In what respects does the liquidity theory mark a fundamental departure from classical theories of interest? (Agra 1956)

9. Discuss the liquidity preference theory of interest. How far is this theory applicable to Indian conditions? (Rajasthan 1959)

10. Distinguish between money rate of interest and real rate of interest. How is the former a necessary price for overcoming the preference for liquidity? (P.U. 1958 Suppl.)

11. Account for differences in rates of interest on loans of different kinds with a special reference to long-term and short-term rates. (C.U. B.A. Hons. 1951)

12. Enumerate the causes that give rise to interest payment. Does the net rate of interest tend towards equality ? (P.U. 1945)

13. "Interest is the measure of marginal productivity or marginal forbearance." Explain and comment.

14. What is 'Marginal efficiency of capital' ? On what factors does it depend ? (Bom. 1955)

15. State Keynes's Theory of Interest and explain how it differs from the classical theory. (Delhi, B.H. 1951)

16. "Interest rates are the price, not of savings but of liquidity." Explain and comment upon this statement. (Bom. 1954)

17. Interest balances the supply of capital savings and capital investments. Discuss. (P.U. 1951 Suppl.)

18. Discuss and explain clearly the part played by rate of interest in maintaining equilibrium between savings and investment.

19. Examine the effect of economic progress on interest. Will the rate of interest ever fall to zero ?

20. What would be the position of interest in a socialist state ? Is there any justification for controlling rates of interest by legislation ?

21. What is the function of the rate of interest ? Does the rate of interest have any function in a socialist economy ? (Bom. 1955)

Profits

1. Analyse profit into its constituent elements. Explain the factors that determine each element. (Allahabad 1955)

2. Who is to be regarded as the risk-taker in modern economic organisation ? Is he paid for it and, if so, on what principles ?

3. Give briefly the important theories of profits.

4. Discuss the importance of the distinction between the Static and Dynamic state for the theory of value and for the theory of profits. (C.U., B.A. Hons. 1952)

5. Discuss critically the different sources of profits. Can profits exist in a stationary state ? (Bom. 1953)

6. "Profits are like rent and do not enter price." Do you agree ? (J. & K. 1957 Suppl.)

7. Explain : "Profits are a constituent part of normal supply price. (P.U. 1942)

8. Explain the nature of profits. Do profits enter into price ? (Delhi 1959)

9. Distinguish between *normal* profits and *actual* profits. Show how expected profits influence production. (C.U. 1952)

10. Define normal profit and explain why it is included in the normal cost of production. (C.U. 1954)

11. Examine the validity of the following propositions :—
   (*a*) Profits tend to equality ;
   (*b*) Profits tend to a minimum.

12. Indicate the nature of profits and indicate the position they are likely to hold under a socialistic regime. (P.U. 1938)

13. "The modern theory of profit regards the entrepreneur's contribution to the process of production as that of bearing non-insurable risk and uncertainties." Discuss. (Agra 1956)

14. Discuss the view that profit is the result of progressive change. (Bom. 1957)

15. "Profits are dynamic in their origin and institutional in their appropriation." Explain.

Or

Profits are said to be both causes and effects of economic dynamics. Do you agree ? (P.U. 1939)

Money

Definition

1. Discuss the significance of the evolution of money in modern economy. What are its economic and social effects ? (Patna, 1955 Suppl.)

2. (*a*) "Money is what money does." Explain this statement and briefly define money.

   (*b*) Explain the growing importance of bank deposits as a form of money. (Patna, 1953)

3. If all money suddenly disappeared from the country, what difficulties would be encountered in ordinary business ?

4. Write short notes on : (*a*) Bimetallism, (*b*) Reflation, (*c*) Seigniorage, (*d*) Fiduciary money, (*e*) Standard money, (*f*) Token money, (*g*) Gold Bullion Standard, (*h*) Monometallism, and (*i*) Legal Tender.

5. What is Gresham's Law ? Point out the different forms of its application and the conditions essential to its operation. (Gauhati 1958)

6. "The Indian rupee is a curious mixture of token and standard coin." Discuss.

7. Elucidate the merits and drawbacks of a paper currency system. Indicate methods of control. (P.U. 1949)

8. Account for the adoption of gold as a money material. Why has it been discarded in recent times ?

9. Distinguish between (*a*) free coinage and gratuitous coinage, (*b*) mint price and market price of gold.

10. Define money and briefly discuss its various functions. How are these functions performed by the different forms of money that we use ?

Monetary Systems

1. What do you mean by the term "System of money" ? What are the essential features that a monetary system should have before it can be looked upon as satisfactory. (P.U. 1936)

2. What do you understand by bi-metallism ? Briefly discuss its merits and demerits.

3. Discuss the strong and weak points of the gold standard and indicate its future.

4. "Gold standard is a jealous god. It will work provided it is given exclusive directions." Discuss this statement with reference to the causes of the failure of the Gold standard during the inter-war period. (Bom. 1954)

5. Explain the principal features of the Gold Bullion Standard and compare it with Gold Exchange Standard.

6. What are the essentials of Gold Exchange Standard ? Discuss its merits and demerits. (Nag. 1952)

7. How far can Gold Standard ensure stability of the price level ?

8. Show that a country may have a Gold Standard though it has no gold in circulation and no stock of gold.

9. What are the essential features of a gold standard ? Distinguish in this context between a gold currency standard and a gold exchange standard. (Delhi 1953)

10. The case for the gold standard is the case for a strict *de jure* gold standard, with each country following "the rules" so that no gold standard currency becomes distrusted. Explain and illustrate. (P.U. 1941)

Value of Money

1 What is meant by value of money? How is the value of money determined (All 1955)

• 2 What is the Quantity Theory of Money? Does this theory give adequate explanation of the forces governing the value of money? (P U 1951 Suppl)

3 Explain clearly the relation between the quantity of money in circulation and general price level in the country (C U 1942 1938 Agra 1942 Delhi 1939)

4 What according to the Quantity Theory of Money would be the effect on the general level of prices of the following (other things being supposed to remain the same)

(*a*) Improvement in the means of communication (*b*) The growth of trade and population (*c*) The development of deposit banking

5 Give reasons for the view that the Savings and Investment theory marks an improvement on the older formulation of the Quantity Theory in explaining price changes (C U B A Hons 1946)

6 "The modern tendency in economic thinking in fact is to discard the old notion of the quantity of money as a causative factor in the state of business and a determinant of the value of money and to regard it as a consequence Discuss (Bom 1953)

7 Discuss the view that price changes are better explained by the saving and Investment theory than by the Traditional Quantity theory (Poona 1957)

8 "Elasticity of demand for money is unity Discuss

9 "The value of money like the value of anything else is mainly a question of demand and supply Elucidate (All 1953)

10 What do you understand by 'Index Numbers Construct a table of simple index numbers What principles should be borne in mind in constructing such a table What is the object and importance of index numbers (Agra 1953)

11 How are changes in the value of money measured How do such changes affect the distribution of income among different classes (Delhi 1959)

12 What are weighted index numbers and what purposes do they serve

13 Describe the construction of Cost of Living Index Numbers Illustrate their utility in the settlement of wage disputes (P U 1950)

14 Bring out carefully the economic consequences of currency inflation (P U 1953 Suppl)

15 What are the techniques used by modern governments for checking inflation during (*a*) war time (*b*) peace time (Bom 1954)

16 Examine carefully the efficacy of monetary measures for controlling inflationary pressures (C U Hons 1954)

17 "Inflation is unjust and deflation is inexpedient" (*Keynes*) Discuss

18 "Thus money which is a source of so many blessings to mankind becomes also unless we can control it a source of peril and confusion" Elucidate

19 Explain the terms 'inflation' 'deflation' and 'reflation' Discuss the influence of an unbalanced budget on prices (C U 1936)

20 To what extent can cheap money policy succeed in stimulating private investment in India (Madras 1953)

21 Examine the various objectives of monetary policy Which of them has become more important in modern times and why? (Patna 1954)

Or

What are the objectives of monetary policy? What objective in your opinion should be preferred? Give reasons (Poona 1957)

• 22 "By its dynamic functions money tends to exert a powerful influence on the trends of price level on the volume of production, trade and consumption, and on distribution of wealth Explain (Delhi 1957)

23 What factors govern the supply of money with the public? What is the relation of supply of money to prices? (Delhi 1958)

Credit and Banking

1 Explain the economic advantages of a sound system of credit

2 "Like all useful and delicate instruments credit is dangerous when abused" Why (P U 1935)

3 "Credit is capital" Criticise Trace the effect of credit on prices

4 What do you mean by "Money Market"? Indicate the constituents of the money market and the nature of the transactions which take place therein (Delhi 1925)

5 What is an exchange bank Indicate its place in the economic organisation of the country (P U 1937)

6. Explain the following

(a) Every bank loan creates a deposit

(b) "A good bank manager knows the difference between a bill and a mortgage

7 What are the main functions of banks Explain the part played by banks in the economic development of a country (P U 1958)

8 Critically discuss the functions of commercial banks and show how far the Indian commercial banks have performed them satisfactorily (Lucknow 1959)

9 Show why banks should maintain adequate cash reserves What help can legislation offer in this matter

10 Describe the manner in which a commercial bank distributes its assets to maintain liquidity (Nag 1955)

11 What considerations influence the bankers in determining the character composition and the amount of his reserves

12 What are the basic principles underlying commercial banks scale of preferences for different classes of assets which they hold How far are these preferences open to modification (Patna 1953)

13 "A constant tug of war between the competing aims of liquidity and profitability summarises the functions of a modern bank" Discuss (Bom 1955)

14 Discuss the role of bank credit in national economy and the importance of controlling such credit (Delhi 1951)

15 Prepare an imaginary balance sheet of a bank

16 How do banks create credit Point out the limitations of credit creation (P U 1953 Suppl Delhi 1959)

Or

What are its guiding principles (Patna 1956)

17 "Bank deposits in modern times have changed from deposits of cash to deposits of credit" Explain (All 1953)

18 "The Bank does not create money out of the air it transmutes other forms of wealth into money" Discuss (Bom 1953)

19 What are the functions of Central Bank To what extent does Reserve Bank of India perform these functions (Madras 1953)

20 Discuss the functions of Central Bank with reference to the economic development of a country (P U 1957)

21 What are the principal methods of regulating note issue (P U 1940)

22 Consider the need for controlling monetary supply Briefly enumerate the more important methods which the central bank of a country may adopt in order to control such supply (P U 1951)

23. Examine the comparative importance of discount rate and open market operations as methods of credit control. State the reasons why the discount rate policy is less important today than what it was under the gold standard. (Agra 1953)

24. Explain the significance of bank rate.

How does it influence the general level of production and prices, business activity and employment ? (Delhi 1952)

25. How does a modern Central Bank control the quantity and quality of credit ? (Bom. 1955)

Or

How does a central bank seek to control the volume and direction of credit ? What are the common limitations on its power to do so ? (Delhi 1958)

26. Enumerate the main difficulties in the way of and limitations to the central bank's powers of controlling credit.

27. Discuss the necessity of distinguishing between general credit control and selective credit control. (Delhi 1957)

28. What are the sanctions behind the authority and power of the Central Bank over the banking system of a country. (Patna 1954)

29. How can you make a case for nationalisation of banking ? (Patna 1955 Suppl.)

30. Give a brief evaluation of the working of the International Bank for Reconstruction and Development. (Agra 1953)

International Trade

1. "In effect, foreign trade is nothing more than a highly organised system of barter." Explain.

2. "Foreign trade is merely an extension of the principle of division of labour." Explain.

3. In what respects does international trade differ from home trade ?

4. Why is it necessary to formulate a theory of international trade distinct from that of domestic trade ?

5. What is the economic basis of inter regional and international trade ? (Agra 1953)

6. If international trade is based on the principle of territorial division of labour, it should be complementary. How do you explain the competitive character of international trade ? (Agra 1956)

7. Explain the theory of 'comparative cost'. How is this theory applicable to international trade in modern times ? (Delhi 1958)

8. "The theory of international trade is only a special application of the theory of inter-regional trade." Do you agree ? Give reasons. (Patna 1956)

9. Critically discuss the law of comparative costs and show how far it is a satisfactory explanation of the international division of labour. (Rajasthan 1959)

10. Explain the nature and origin of gain from international trade. Under what conditions does a country fully realise its potential gain ? (Bom. 1953)

11. Write short notes on any three of the following : – (*a*) Law of comparative costs, (*b*) Invisible exports, (*c*) Dumping, (*d*) Discriminating Protection, (*e*) Protective Tariff, (*f*) Free Trade, (*g*) Imperial Preference, (*h*) Import duties *vs.* import quotas, (*i*) Terms of Trade.

12. Explain, with examples, why certain countries export more than they import, while others import more than they export. (C. U. 1940)

13. Explain :—

(a) Why does a country import a commodity that it can produce more cheaply ?

(b) Why does a country produce a commodity which it also imports ?

14. Review the chief arguments in favour of free trade and show why it has been almost universally abandoned.

15. State and examine the main arguments which are generally put forward in favour of protection. (All. 1955)

16. Write a critical note on the role of protection in Indian industrial development. (Madras 1953)

17. Discuss the need of a policy of protection in an under-developed country. (Delhi 1958)

18. What are the chief arguments in favour of a policy of protection ? How can protection encourage planning ? (Rajasthan 1959)

19. What should be the main features of the fiscal policy of an under-developed country ? Explain giving examples from India. (Lucknow 1959)

20. Indicate the dangers of a policy of protection. How would you prevent or minimise them ?

21. Distinguish between protective tariff and revenue tariff.

22. In what manner, and to what degree, is the infant industry argument compatible with the principle of multi-lateralism in international trade? Expound. (P.U. 1949)

23. Discuss relative importance of (a) import duties, (b) bounties, and (c) import quotas as methods of protection. How do you account for the increasing use of import quotas in recent years ? (Agra 1953)

24. Examine the meaning of the concept of "terms of trade" and point out the repercussions of a change in the terms of trade on the economy of a country. (C.U. Hons. 1945 ; Lucknow 1959)

25. Distinguish between Balance of Trade and Balance of Account. What are the items which enter into a country's balance of payments ? How is the balance of payments influenced by export or import of capital ? (Delhi 1953 ; P.U. 1955 Suppl.)

26. Examine the merits and demerits of the various methods of correcting an adverse balance of payments. (P.U. 1955)

27. Discuss the mechanism of adjustment in the balance of payments under gold standard and under paper currencies. (Patna 1955)

28. Describe briefly the manner in which a disturbance in the balance of payments of a country tends to correct itself under paper currency systems. (C.U. Hons. 1955)

29. Weigh the effects of Devaluation on the economy of a given country that may happen to adopt it. (P.U. 1950)

30. What do you understand by a favourable balance of trade ? Is it necessarily advantageous to a country ? Discuss with reference to Indian conditions.

31. Analyse the dictum that 'Exports pay for Imports.' How should this notion affect tariff policy ? (P.U. 1949)

Or

Explain how an excess of either exports or imports tends to correct itself. (Gauhati 1958)

32. Briefly mention the advantages and disadvantages of foreign trade.

33. Why does a government often try to bring the country's foreign trade under its control ? (P.U. 1959)

Foreign Exchanges

1. Explain how foreign exchange rates are determined. (C.U. 1947)

2. Show how the rate of foreign exchange is determined under a system of inconvertible paper currencies. (C.U. 1951)

3. What are specie points ? On what do these points depend ? Can exchange go beyond these points ? If so, when and how ?

4. Examine critically the Purchasing Power Parity Theory and compare it with the Balance of Payments Theory of foreign exchanges. (Patna 1953)

5. Enumerate the influences that bring about fluctuations in the rates of exchange. (P.U. 1936)

6. Discuss the effects of the change in the rate of exchange of a country on (*a*) its balance of payments, (*b*) terms of trade, and (*c*) its internal price level. (C.U. B.A. Hons. 1954)

7. In what way is foreign trade influenced by a variation in the rate of exchange ? (Rajasthan 1959)

Explain the main features of the General Agreement on Tariff and Trade. (Lucknow 1959)

8. Discuss the limits of fluctuations of the rate of foreign exchange under paper standard. (C.U. 1944)

9. Develop the concept of a normal or equilibrium rate of exchange. How does it differ from day to day rates ? (Delhi 1954)

10. What considerations should a country take into account in fixing the normal rate of exchange of its currency ? (Delhi 1958)

11. What do you understand by balance of payments ? What methods would you suggest for correcting an adverse balance of payments ? (P.U. 1957 Suppl.)

Or

Examine the merits and demerits of the various methods of correcting an adverse balance of payments. (Delhi 1959)

12. "The distribution of metallic money is in a large measure the result of international forces." Explain the statement. What are the factors which cause gold movements now-a-days ?

13. Write brief explanatory note on the object and working of exchange control in any country with which you may be familiar. (P.U. 1942)

14. Briefly compare the main features of the International Monetary Fund with those of International Gold Standard. (Bom. 1955)

15. How and to what extent can the International Monetary Fund help a member country in solving its balance of payments. (C.U. B.A. Hons. 1954)

16. Mention the chief aims and objects of the International Monetary Fund. Estimate the Fund's success in achieving them. (Utkal 1957)

17. Discuss the working of the International Monetary Fund. What are the limitations under which it has to function ? (Patna 1956)

In what way has India benefited by it ? (Lucknow 1959)

18. Explain the objectives, nature and limitations of Exchange Equalization Funds. (Agra 1955)

19. Discuss the origin and character of Exchange Clearing Agreement and discuss their influence on foreign trade. (C.U. B.A. Hons. 1946)

20. Write short notes on any three of the following :—

(*a*) Cross Rate. (*b*) Blocked Accounts. (*c*) Mint Par.

Trade Cycles

1. What is a trade cycle ? Discuss some of its characteristics.

2. State the fundamental causes of the trade cycle and briefly point out the weapons with which to combat it. (P.U. 1951 Suppl.)

3. Bring out the part played by the following in the trade cycle : (*a*) Changes in the supply of money, (*b*) waves of optimism and pessimism, (*c*) under-consumption.

4. Examine critically the monetary theory of trade cycles. (C.U. B.A. Hons. 1955)

Or

"Trade cycle is purely a monetary phenomenon." Discuss. (Poona 1957)

5. Account for the periodicity of business cycles. (C.U. 1953)

6. Describe the various phases of the Trade Cycle. What part does 'Innovation' play in the Trade Cycle ? (Bom. 1953)

7. What is, in your judgment, the most satisfactory explanation of trade-cycles. Give reasons for your answer. (P.U. 1952)

8. Discuss the various measures which should be adopted to fight business fluctuations.

9. Discuss the objectives of monetary policy. How far can a suitable monetary policy bring about business revival ? (Patna 1957 Suppl.)

10. What part does Fiscal Policy play in controlling Trade Cycle ? (Bom. 1952)

11. Write a brief essay on the Multiplier. (Bom. 1955)

12. To what extent is it possible to control cyclical fluctuations by means of a flexible public works policy ? (C.U. B.A. Hons. 1954)

13. Are savings and investment in an economy always equal ? If not, how can this condition be brought about ? (Agra 1959)

14. What is the significance of investment for the economic development of a country ? (Lucknow 1959)

15. Examine the validity of the postulates of the classical theory of employment.

16. Define 'full employment' and show why this stage cannot last long and economic fluctuations are inevitable. (Lucknow 1959)

Public Economics

1. Write a critical note on the desirability of efficient State regulation of industry with reference to existing conditions in India. (P.U. 1935)

2. Every State intervenes or interferes to some extent but some States go much further than others. What in your opinion should be the limits of State intervention in economic matters ?

3. Enumerate the economic functions of a modern State.

Public Finance

1. "Public Finance is no longer regarded as the master of State policy but as its servant." Discuss. (Madras 1958)

2. The basic principles of public finance are the same as those of a family budget. Explain and discuss the statement. (Patna 1953)

3. Give the principal sources of income and the main items of expenditure of the Government of India. What changes, if any, would you wish to effect ? State your reasons clearly in either case. (P.U. 1932)

4. Examine the principles which should govern public expenditure and bring out their implications. (Delhi 1951)

5. What are the objects of public expenditure in a modern State ? Account for the growth of public expenditure in India since 1947. (Allahabad 1955)

6. Explain the principle of Maximum Social Advantage and illustrate its usefulness in evolving a suitable policy of public expenditure. (Delhi 1953 ; Bom. 1953)

7. State and explain the rate of public expenditure in the building up of a Welfare State. (P.U. 1959)

In what way can public finance be of help in the implementation of economic policy ? Explain with examples. (Lucknow 1959)

What is the significance of Adam Smith's canons of taxation under the present economic conditions ? (Lucknow 195[illegible])

8. Distinguish between recurring and non recurring expenditure. How would you proceed to raise income to meet them ? (P.U. 1937)

9. Discuss whether (a) wars, and (b) public utility projects would be financed by taxes or loans. (P.U. 1950)

10. Discuss how public expenditure influences production and distribution in various ways. (Delhi 1959)

11. Discuss the effects of income tax, the inheritence tax and the sales tax on production and distribution. (Patna 1952)

Or

Compare taxation and borrowing from the point of view of their effects on production and distribution of wealth in a society. (P.U. 1956)

12. Under what circumstances is unproductive expenditure justified ? Discuss the question with special reference to irrigation and famine relief in India.

13. Discuss how far taxation may be used for reducing inequalities in the distribution of wealth and economic welfare. Explain in this connection the relative merits of proportional and progressive taxes. (Delhi 1951)

14. Discuss the principles that justify progressive taxation. What are its limitations ? (Poona 1957)

15. What are the principal instruments of public finance for reducing inequalities of income and wealth ? Discuss their efficiency under Indian conditions. (Bombay 1954)

16. Enunciate the fundamental principles of taxation. (P.U. 1952 Suppl.)

Or

Examine the implications of 'equity' as a principle of taxation. (Delhi 1958)

Or

What is a tax, and what are the principles adopted by the State in imposing a particular tax or taxes on its citizens ? (Agra 1959)

17. What are the essentials of a good tax system ? (Nag. 1952)

18. Mention the taxes which (a) violate and (b) observe the principle : "The rich should pay more in taxes than the poor."

19. Explain the doctrine of equality of sacrifice in a system of taxation. (P.U. 1948, 1949)

20. Examine and compare the merits of the different interpretation, placed upon the principle of justice in taxation.

21. Critically examine the principle of Ability in public finance. What factors would you keep in view in measuring the ability of an individual to pay taxes ? (Madras 1958)

22. Critically examine the following principles of taxation and point out the difficulties in their practical application :

(a) The principle of equality of sacrifice.

(b) The principle of ability to pay.

23. Explain the Diffusion Theory in relation to taxation.

24. Write short notes on :—

(a) Canons of Taxation (P.U. 1954) ; (b) Progressive Taxation (c) Treasury Bills.

25. "From the point of view of its effects on production, an inheritance tax has certain advantage over an income tax." Elucidate this statement. (C.U., B.A. Hons. 1946)

26. What do you mean by the incidence of tax ? Trace the incidence of (1) customs duty paid in Bombay on long cloth imported from Lancashire by a wholesale merchant in Delhi, who sold it to a retailer in Gurdaspur, who sold it to a local resident ; and income-tax paid by the retail dealer in Gurdaspur. (P.U. 1936)

27. Discuss the practical importance of the study of the incidence of taxation. How would you determine the incidence of tax on a consumable commodity. (P.U. 1939)

28. Distinguish between impact and incidence of a tax. Give illustrations. Trace the incidence of a tax on (a) economic rent, (b) monopoly, (c) building, (d) import duties, and (e) sales tax.

29. Distinguish between the incidence of a tax and the effect of a tax. Are taxes on imports borne by the foreign producer or the domestic consumer ? (Madras 1958)

Or

What is meant by 'differentiation' in taxation ? Give illustrations.

30. Discuss the advantages and disadvantages of direct and indirect taxes in a sound tax system. (Agra 1935 ; Patna 1954)

31. Discuss the effects of high income taxes on incentive and enterprise. (C.U. B.A. Hons. 1955)

32. Examine critically :—

Both direct and indirect taxes are needed to make up an equitable and adequate tax system. (Agra 1954)

33. Under what circumstances is it justifiable to impose indirect taxes ? (C.U. B.A. Hons. 1954)

34. Examine the case for income tax and death duty in modern States. How far should taxation be redistributive of incomes ? (Patna 1954)

35. What is meant by taxable capacity ? What factors determine it ?

36. Examine the purposes for which public debt is generally incurred. (C.U. 1946)

37. What are Public Debts ? Discuss the ways in which their burden can be diminished. (C.U. 1951)

38. Comment on the view that the repayment of public debts, if at all necessary, should be carried out only under appropriate monetary conditions. (C.U. B.A. Hons. 1955)

39. Discuss the uses and dangers of external loans.

40. Is there a limit to the size of the national debt that a country can have? (C.U. B.A. Hons. 1954)

41. What are the uses of public loans in peace and war ? Should a war be financed by taxes or loans or both.

42. Attempt a lucid essay on the significance of public debt in a plan for economic development. (Agra 1951)

43. What is public debt ? Describe the money and real burden of public debit. (Utkal 1957)

44. How is war financed ? Can the burden of a war be shifted to posterity ? If so, how ?

45. Discuss inflation as a means of financing war.

46. Some writers have urged that there should be only one tax—a tax on land value. Do you agree or disagree with the view ? Give reasons for your answer. (P.U. 1941)

47. Consider the view that an unbalanced budget necessarily leads to inflation.

48. What is the kind of a tax system that will be suitable for the development programme of India. (Delhi 1957)

49. Discuss the relative merits of taxation and borrowing as measures of financing the development of an under-developed country. (Delhi 1958)

Economic Systems

1. The present organisation of industry is often described as capitalistic. Give an explanation of the meanings of this term pointing out the distinguishing features of capitalism. (P.U. 1949, 1957)

2. Discuss the economic consequences of the institution of private property. (P.U. 1951 Suppl.)

3. Analyse the problem of inequality of incomes in modern society and suggest remedies. (P.U. 1956 ; Delhi 1952)

4. The modern economic system has been called "a Government by price." Do you agree ? Give reasons.

5. "The present is frequently described as the age of Economic Freedom." Discuss.

6. Critically examine the thesis that maximum satisfaction is attained under the capitalist *laissez faire* economy. (P.U. 1951)

7. What is wrong with capitalism ? How could you propose to remove its defects ? (C.U. 1951)

8. "Capitalism contains within its womb the seed of its own destruction" —Marx. Do you agree with this view ? Give reasons.

9. Do you agree with the view that capitalism should be allowed to function unhampered in India for some time ? Give reasons.

10. How has capitalism solved the problem of allocation of resources ? How far is it satisfactory ? (Patna 1955 Suppl.)

11. Explain the principle according to which productive resources are allocated among different uses in a capitalist economy. Is this allocation socially desirable ? Give reasons. (J. & K. 1954 Suppl.)

12. Critically examine the main tenets of socialism. (P.U. 1948)

13. Write a note on socialist programmes. (C.U. 1946)

14. Weigh whether individual initiative is furthered or frustrated under socialism. (P.U. 1949)

15. How does socialism maintain the principle of the right to work, and in what way does it achieve it ? Exemplify. (P.U. 1949)

16. Enumerate the distinguishing features of socialism. Would you recommend a socialist economy for India ? (P.U. 1952)

17. Discuss the merits and demerits of Socialism. Which form of socialism is most suited to Indian conditions ? (Rajasthan 1959)

18. Write short notes on :

    (a) *Laissez faire*, (b) Socialism, and (c) Planned Economy.

19. How do you account for the fact that unemployment is more or less a regular occurrence under the capitalist economy ? Is it possible that socialist central planning can abolish unemployment ? (Patna 1956)

20. What is meant by the incentive to work ? Is it better promoted and maintained under the capitalist system than under the Socialist system ? (Patna 1956)

21. What will be the position under socialism of (*a*) interest, (*b*) rent and (*c*) profits ? (Agra 1958)

22. Account for the widespread acceptance of the ideas on economic planning in recent times and examine the claim that a planned economy is more efficient than an unplanned economy. (Gauhati B. Com. 1957)

23. Analyse the essentials of Planned Economy. (P.U. 1950)

24. Is it possible to have a rational allocation of resources in a planned economy ? Discuss with reference to India's five-year plans.

25. What are the features of an under-developed economy ? Mention the basic handicaps in developing the economy of an under-developed country. (P.U. 1959)

26. Bring out clearly the implications of a socialistic pattern of society. Why has such a pattern been thought fit for India ? (Agra 1958)

27. How far is it correct to say that a certain degree of inequality in income and wealth is essential for economic progress ? Discuss with reference to India.

28. Trace the effects of social institutions on the economic life of a country. (P.U. 1944)

29. What do you understand by 'Mixed Economy' ? Discuss its merits and demerits with reference to Indian conditions. (Agra 1959)

INDEX

(Numbers refer to Pages)

A

Ability to pay theory, 540
Abstinence theory of interest, 304
Acceleration Principle, 500
Acceptance banks, 393
Adaptability of the modern economic system, 134
Ad Valorem tax, 531
Agents of production, 80
Aggregate output and employment. 487
Agio theory of interest, 304
Agricultural banks, 394
Allocation of the factors of production, 120
,, ,, in Russia, 611
Alternative costs, 205
Alternative wants, 28
Analytical or abstract method of economics, 14
Anarchism, 599
Annuities, terminable, 576
An old tax, criticism of, 532
Anticipatory revenue, 528
Arbitrage operations, 478
Arbitration, 294
Authorised capital, 139
Average. fixed cost, 169
Average revenue, 222

B

Bad money and Gresham's law, 344
Balance of payments, 453
,, ,, different meanings of, 455
,, ,, equilibrium of, 455
,, ,, items entering, 454
Balance of trade, 453
Bank balance sheet, 406
,, credit, 392
,, deposits, 399
,, loans, 400
,, money, 342
,, rate, 421
,, reserves, 404
Bank rate policy, 421
,, ,, Keynes' view of, 424
,, ,, limitations of, 423
,, ,, theory of, 422
,, ,, under gold standard, 422
Banking, principles of note issue, 413
Banks, evolution of, 398
,, General functions of, 399
,, kinds of, 399
,, usefulness of, 406
Barter, difficulties of, 336
Bears, 163
Benefit theory of taxation, 539
Beveridge social security scheme, 299,
Bilateral monopoly, 235
Bill of exchange, 392
Bimetallism, 347
,, merits and demerits of, 348
Blocked accounts, 477
Bonus systems of wages, 289
Brassage, 341
Brazen law of wages, 274
Brettonwoods conference, 479
Bulls, 163
Business cycles, 497
Business expansion, limits to, 115
Business organisation, forms of, 136
Consumers' cooperation, 143
Individual entrepreneur, advantages of, 136
Joint Stock Company, 138
Holding Company, 142
Partnership, 137
Producers' co-operation, 142
State Enterprise, 143

C

Call option. 164
Call rate, 421
Cambridge Equation, 370
Canons of taxation, 531
Capacity, taxable, 545
Capital formation, 107
,, functions of, 106
,, importance of, 104
,, mobility of, 133
,, nature and importance of, 104
Capitalism, 591
,, achievements of, 593
,, criticism of, 593
,, outstanding features of, 591
Capital levy, 577
Cartel, 147
Central Bank, 409
,, ,, as the banker of the state, 416
,, ,, as the bankers' bank, 417
,, ,, functions of a, 412
,, ,, lender of last resort, 427
,, ,, nationalisation of, 427
,, ,, principles of a, 411
Central banks, 399, 409
Certainty in taxation, 532
Cheap money *Vs.* dear money, 385
Cheque, 393
Circulating capital, 106
Clearing agreement, 476
Clearing house, 394

Coinage, free and gratuitous, 340
Coins, 340
Collectivism, 597
Combinations, factors favourable to, 147
,, factors unfavourable to, 148
,, types of, 146
Comforts, 28
Commercial banks, 399
Commodity tax, 557
Communal wealth, 23
Communism, 599
Company, holding, 142, 147
,, joint-stock, 138
,, private limited, 138
,, public limited, 139
Comparative costs theory of international trade classical version of, 434
,, modern version of, 435
Compensatory action of fiscal policy, 506
Compensatory theory of taxation, 542
Competition imperfect, 157
,, perfect, 156
Competitive wants, 28
Complementary wants, 28
Composite demand, 69
,, value in, 218
Composite supply, value in, 218
Compulsory reduction of interest, 577
Concentration, causes of, 101
Concept of indivisibility, 113
Conciliation, 294
Constant Returns, law of, 127
Consumer's cooperation, 143
,, preferences, 51
,, sovereignty, 57
,, and its limitations, 58
Consumer's surplus, 52, 53
,, and the law of Diminishing Marginal utility, 52
,, criticised, 55
,, importance of, 56
,, meaning of, 52
,, measurement of, 53-54
Consumption, meaning of, 26
Contraction of demand, 66
Conversion, 576
Convertible money, 342
Co-operation, consumers', 143
Co-operation producers', 142
Corner, 147
Cosmopolitan wealth, 23
Cost of living index number, 379
Cost of production, meaning of, 167
,, average, 168
,, marginal, 168
,, selling, 240
,, theory of value, 210
,, reproduction theory of value, 211
,, service principle, 539
Costs, prime and supplementary, 168
Council bills, 351
Credit, 392
,, and capital, 397
,, and prices, 396
,, control of, 419
Credit creation of, 401
,, dangers of, 396
,, its functions, 395
,, instruments, 392
,, rationing, 427
Crisis, 493
,, course of a, 497
,, remedies of, 504
Cultivation—Extensive and Intensive, 83
Cumulative preference shares, 139
Currency, best system of, 360
Currency exchange standard, 360
Currency principle of note-issue, 413
Custom duties, 451

D

Darshani Hundi, 393
Death duty, 562
Debentures, 139
Debt, floating, 570-571
Debt redemption, 576
Decentralisation of Industry, 102-103
Deductive methods, 14
Defence argument for protection, 448
Deferred shares, 139
Deficit financing, 585
Deficit financing during depression, 586
,, ,, and Economic development, 587
,, ,, and inflation, 588
,, ,, scope and limitations of, 590
Definition, the problem of, 1
,, Robbins', 3
Deflation, 376
Degressive tax, 531
Demand, 61
,, changes in, 66-69
,, curve, 63-64
,, elasticity of, 69
,, law of, 65
,, schedule, 61-62
Deposit, 399
Depreciation, 458
Derivative revenue, 528
Determinants of employment, 490
Devaluation, 458
Diffusion theory of taxation, 556
Diminishing Marginal Utility, law of, 30-33
,, implications of, 34
,, limitations of, 32
,, practical importance of, 37
Diminishing Marginal substitutability, law of, 33-34
Diminishing Returns, law of, 121-124
,, application to agriculture of, 124
,, importance in economic theory, 126
,, in a general form, 125
,, in intensive and extensive forms, 123
Direct revenue, 528
,, taxes, 553
Direct taxes, merits and demerits of, 554

Discounting of bills, 400
Disputes, 287
Distribution need for a separate theory of, 250
Diversification of industry argument, 447
Diversity in taxation, 535
Division of labour, 98
,, advantages of, 98
,, and market, 100
,, disadvantages of, 99
,, territorial, 101
Drafts, 393
Duopoly, 245
Dynamic theory of profits, 326

E

Economic rent, 259
,, ,, assumptions, 12
Economics, as an art, 13
,, definition of, 1, 3
,, as a science, 12
,, as a science of material welfare, 2
,, as a science of wealth, 1
,, laws of, 10
,, methods of, 14
,, Relation of, to other sciences, 8
,, scope of, 5
,, value of the study of, 15
Economies, internal and external, 114
,, New, 616
Economy in taxation, 533
Efficiency of labour, 94
,, and wages, 281
Elasticity in taxation, 534
Elasticity of demand, 69
,, and consumers' surplus, 71
,, and the Law of Diminishing Marginal Utility, 71
Elasticity of demanus, determination of, 71
,, diagrammatic representation of, 74
,, for money, 372
,, measurement of, 73
,, practical application of, 77
Elasticity of supply, 173
Employment argument for protection, 448
Employment, concept of full, 495
,, determinants, 490
,, theory, modern version, 491
Employment exchanges, 297
Employment Multiplier, 493
Engles' Law of Consumption, 29
Entrepreneur, role of, 110
,, functions of an, 110
,, individual, 136
,, limitations of, 136
Entrepreneurial functions, delegation of, 110-111
Equality in taxation, 531
Equality of sacrifice theory, 540
Equation of Exchange Fishers, 363
Equation Monetary Cambridge, 370
Equilibrium, 177
Equilibrium, general theory of, 201
,, criticism of, 202
,, of supply and demand, 177
,, long period, 194
,, rate of exchange, 469
Equilibrium level of income and employment, 494
Equimarginal returns, law of, 40-42
Exchange and correction of trade disequilibrium, 457
,, banks, 399
,, control, 450, 473
,, equalisation account, 475
,, favourable, 468
,, foreign, 461
,, forward, 477
,, pegging, 475
,, rate, 462
,, stability, 471
,, unfavourable, 468
Expansion of business, limits to, 115
Extension of demand, 66
,, supply, 173
Extensive cultivation, 83
External economies, 114-115
External loan, 574
Evasion and shifting of tax, 552

F

Fabian socialism, 600
Factors, affecting demand and supply, 175
Factors determining volume of production, 79-80
Factors of production, allocation of, 120
,, classification of, 80
,, combination of, 119
,, mobility of, 131
Faculty theory of taxation, 540
Fatigue study, 128
Favourable exchange, 468
Fee, 529
Finance in Russia, 609
Firm, optimum, 194
,, representative, 199
Fixed capital, 106
,, Fiduciary Principle, 414
Floating debt, 570-571
,, capital, 106
Forced saving, 316
Foreign exchange, 461
,, trade advantages and disadvantages of, 442-43
,, Barriers to, 450
Forward exchange, 477
Free coinage, 340
Free goods, 18
Free trade, 445
Fund, International Monetary, 479
Futures, 162

G

General equilibrium theory, 201
,, criticism of, 202

Geographical mobility of labour, 132
Gold bullion standard, 350
  ,, circulation standard, 350
  ,, exchange standard, 351
  ,, movements, causes of, 359
  ,, parity standard, 353
  ,, points, 463
  ,, standard, full, 350
  ,, advantages of, 353
  ,, breakdown of, 356
  ,, disadvantages of, 354
  ,, functions of, 354
  ,, future of, 357
  ,, in practice, 355
  ,, rules of, 355
Goods and their classification, 18
  ,, economic, 18
  ,, free, 18
Gresham's law, 344
Guild socialism, 598

H

Haisiyat tax, 568
Health Insurance, 298
Hedging 163
Heyek's Theory, 317
Historical method, 14
Holding Company 142 147
Horizontal Combinations, 146
Horizontal mobility of labour 130
Hundi 393
  ,, darshni 393
  ,, muddati, 393

I

Impact of taxation, 552
Imperfect Competition 237
  size and the number of the firms under 243
  ,, value under 238
  ,, wastes of, 21
Import licences 452
  ,, monopolies, 452
  ,, prohibition, 450
Incidence of taxation, as of a tax on a monopoly, 558
  ,, as of a tax on buildings, 561
  ,, as of a tax on commodities, 557
  ,, as of a tax on income, 564
  ,, as of a tax on imports and exports, 560
  ,, as of a tax on interest 564
  ,, as of a tax on land, 560
  ,, as of a tax on profits, 565
  ,, as of a tax on surplus, 567
  ,, as of a tax on wages, 566
Incidence of Social Insurance, 567
Incidence of a sales tax, 567
Income, its generation, 491
Income elasticity, 70
Income, social and output, 494
  ,, Gross National, 253
Income tax, 564
Inconvertible money, 342
Increase in demand, 67
Increase in supply, 174
Increasing costs in agriculture, 124
  ,, law of, in a general form, 125
  ,, place in economic theory, 126
Increasing return, law of, 126
Index numbers, 378
  ,, weighted, 379
  ,, uses of, 380
Indian system of money, 344
Indifference curves, 42
  ,, ,, properties of, 42
Indifference curves, practical importance of, 46
Indifference map, 45
Indirect taxes, 553
  ,, merits and demerits of, 554
Individual wealth, 22
Indivisibility 113
Inductive method, 15
Industrial banks, 399
  ,, disputes, 287
  ,, ,, settlement of 294
Industries, allocation of factors among, 120
  ,, concentration of, 101
  ,, decentralisation of, 102-103
  ,, localisation of 101-102
  ,, rationalization, 128
Infant industry argument, 447
Inflation 375
Intensive cultivation 83
Interest abstinence theory of, 304
  ,, and rent, 320
  ,, Austrian or agio theory of, 304
  ,, determination of, 313
  ,, differences in rates of 302
  ,, Fisher's theory 305
  ,, gross and net, 301
  ,, in Russia, 610
  ,, in a Socialist state, 320
  ,, Neo classical theory, 306
  ,, Keynes theory of, 307
  ,, Investable funds theory, 311
  productivity theory of, 303
  ,, rate of and economic progress, 319
  ,, zero rate of, 319
Internal borrowing 574
Internal economies, 114
Inter related value, 215
International buffer stocks, 509
  ,, Bank 429
  ,, gold standard 357
  ,, Investment control 509
  ,, Monetary Fund, 479
  ,, production control, 509
  ,, trade, 433
  ,, classical theory of, 434

International gain from, 439
,, modern view of, 435
Investment, meaning of, 493
,, multiplier, 493
Investment control, 509
Investment and Saving, 493
Iron law of wages, 274
Issued capital, 139

J

Joint demand, value in, 216
Joint-stock company, 138
,, demerits of, 141
,, merits of, 140
Joint supply, value in, 215
Justice in taxation, 539

K

Key industry argument, 449
Keynes' theory of interest, 307

L

Labour, demand for, 277
,, division of, 98
,, efficiency of, 94
,, meaning of, 85
,, mobility of, 132
,, peculiarities of, 86
,, productive and unproductive, 85
,, supply of, 277
,, theory of value, 207
Land, meaning and importance of, 82
,, peculiarities of, 82
,, productivity of, 83
,, rent of, 259
,, mobility of, 131
,, cultivation of extensive and intensive, 83
Large scale production, 112
Law Engle's, 29
,, Gresham's, 344
,, of consumer's surplus, 52
of demand, 65
,, of Diminishing Marginal Utility, 30-33
,, of Diminishing Marginal Substitutability, 33-34
,, of supply and demand, 187
,, of Diminishing Returns, 121
,, of Equimarginal Returns, 40-42
,, Say's of Markets, 490
,, supply, 171
,, criticism of, 490
Law, constant returns, 127
,, economic, 10
,, increasing returns, 126
,, of diminishing returns : Tabular representation, 122
,, of substitution, 40-42
Legal tender, limited and unlimited, 341
Limping standard, 347
Liquidity, importance of, in banking, 405
Liquidity preference, and interest, 307
Loans, temporary *Vs.* permanent, 571
Localisation, causes of, 101
Localisation, consequences of, 102
Luxuries, 28

M

Machinery, uses and abuses of, 97
,, and unemployment, 97-98
Malthusian theory of population, 97
,, ,, criticism of, 88
Margin, importance of, 248
Marginal analysis, 37
Marginal cost of production, 168
,, ,, price in relation to, 195
,, ,, productivity, 254
Marginal Productivity, assumption of, 255
Marginal Productivity, criticism of, 256
,, ,, theory of distribution, 254
,, ,, theory of wages, 276
Marginal rate of substitution, 48
,, revenue, 222
,, utility, 34
,, ,, and price, 36
,, ,, and supply, 36
,, ,, of money, 36
,, measurement of, 38
,, ,, relative, 37
,, ,, social, 36
,, ,, Theory of value, 212
Market, conditions of a perfect, 156,158
,, Categories, 156, 160
,, meaning of, 155
,, evolution of, 155
,, extent of, 156
,, perfect and imperfect, 156-158
Market price, 180
,, ,, of fixed supply commodities, 184
,, ,, of flexible supply commodities, 182
,, ,, of perishable commodities, 181
Marrying a contract, 478
Marshall, theory of value, 191
Marxian socialism, 597
,, unemployment, 487
Measurement of elasticity of Demand, 73
,, ,, of supply, 173
Methods of Economics, 14
Minimum sacrifice principle, 541
Minimum wages, 290
,, ,, national, 292
Mintage, 340
Mint par of exchange, 463
Mobility of capital, 133
,, of labour, 132
,, of land, 131
Modern Economic system, adaptability of, 134
Modern Theory of population, 89
Modernisation, 128
Monetary policy, 505
,, ,, objectives, 390
,, system Indian, 344

Monetary Policy, Neutral Money, 388
Money, 335
  ,, and capital, 105
  ,, as a means of transferring value, 339
  ,, as a standard of deferred payments, 339
  ,, as liquid assets, 338
  ,, as medium of exchange, 338
  ,, as standard measure of value, 338
  ,, bank, 343
  ,, convertible, 342
  ,, evolution of, 336
  ,, functions of, 338
  ,, foreign, titles of, 462
  ,, inconvertible, 342
  ,, of accounts, 343
  ,, other forms, 342
  ,, marginal utility of, 36
  ,, paper, 342
  ,, quantity theory of, 362
  ,, standard, 342
  ,, supply and demand theory of, 367
Money cost of production, 167
Money market, 408
  ,, its constituents, 408
Monometallism, 349
Monopoly, checks on, 151
  ,, discriminating, 229
  ,, meaning of, 146
  ,, merits and demerits of, 149
  ,, optimum output under, 223
  ,, types of, 146
  ,, price, 220
  ,, public control and ownership of, 152
  ,, recent tendencies toward, 151
  ,, value under, 220
  ,, Marginal revenue and Marginal cost, equalisation of, 221
Monopsony, 152
  ,, price under, 234
Motion study, 129
Muddati hundi, 393
Multiplier, 493

N

National debt, methods of redemption and repayment, 576
National dividend, defined, 251
  ,, ,, measurement of, 253
National income, Gross, 253
  ,, Net, 253
  ,, ,, theory of, 254
National Wealth, 23
Necessaries, 28
Negative Wealth, 23
Net reproduction rate, 92
Neutral Money, 388
New Economics, 616
Nominal capital, 139
Nominal costs, 167
Nominal wages, 273
Non-cumulative preference shares, 139
Normal price and market price, 190
Normal Price—short period, 185
Normal price, theory of, 191
Normal profits, 330
Note issue, principles of, 413
Note-issue, systems of, 414.

O

Objective causes of unemployment, 295
Oligopoly, 245
Open market operations, 425
Opportunity costs, 205
Optimum firm, the, 194, 199
  ,, in relation to the Laws of Returns, 197
Optimum output, 195
Optimum theory of population, 89
Option, call, 164
  ,, double, 164
  ,, put, 164
Ordinary shares, 139
Overpopulation criteria of, 91

P

Paid up capital, 139
Paper money, 342
Paper standard, 360
Participating preference shares, 139
Partnership, 137
  ,, advantages of, 137
  ,, ,, disadvantages of, 138
  ,, limited, 138
Patriotism argument for protection, 449
Payments, balance of, 453
Pegging, 475
Perfect and imperfect market, 156-157
Planned economy, 595
Pool, 147
Population, Malthusian theory of, 87
Population, optimum theory of, 89
Preference shares, 139
Preferential treatment, 451
Premium Bonus system, 289
Price, control and rationing, 186, 382
  ,, elasticity, 70
Price, cutting, 242
Price, definition of, 20
  ,, discrimination, 229
  ,, ,, by dumping, 232
  ,, in relation to marginal cost, 195
  ,, mechanism, 384
  ,, Reserve, 182
  ,, stabilisation, 391
  ,, stability, 471
Pricing of new products, 247
Pricing of productive services, 255
Prime costs, 168
Private property in Russia, 608
Private wealth, 22
Problems of socialistic state, 608
Produce exchange, 161
Producer's cooperation, 142
Production agents of, 80
  ,, factors determining the volume of, 79-80

Production, meaning of, 79
  ,, roundabout, 107
  ,, scale of, 112
Productive labour, 85
Productive services, pricing of, 255
Productivity, marginal, 254
Productivity of Land, 83
Productivity theory of interests, 303
Profession tax, 568
Profit sharing, 289
Profits, 324
  ,, analysis of gross, 324
  ,, analogy to rent, 329
  ,, and marginal productivity, 331
  ,, and monopoly, 328
  ,, and wages, 329
  ,, as a reward for risk bearing, 326
Profits as a reward for uncertainty bearing, 327
  ,, dynamic theory of, 326
  ,, normal, 330
Profits, its function, 332
Progressive tax, 530
Promissory note, 392
Propensity to consume, 26
Proportional reserve system, 414
Proportional sacrifice theory, 540
Proportional tax, *Vs.* progressive, 543
Protection, 445
  ,, arguments against, 449
  ,, arguments for, 447
Public borrowing limits to, 573
  ,, ,, through note issue, 574
Public Credit benefits and dangers of, 569
  ,, ,, burden of, 579
Public economic, 511
Public Expenditure, 521
  ,, canons of, 523
  ,, classification of, 524
  ,, effects of, on distribution, 526
  ,, effects of, on production, 525
Public Finance, distinction between private and, 519
  ,, ,, importance of, 518
Public revenue, classification of, 528
  ,, ,, different sources of, 528
Public works policy or public spending, 507
Pump-priming, 507
Purchasing power parity, 464
Put option, 164

Q

Quantity theory of money, 362
Quantity theory, criticism of, 364
Quasi Rent, 268
  ,, ,, compared with interest, 268
  ,, ,, compared with rent, 268
Quid pro quo theory of taxation, 539
Quota restrictions, 451

R

Rate, Net-reproduction, 92
Rates, incidence of, 562
Rates of exchange, 462
  ,, ,, fluctuations of, 467
  ,, ,, under gold standard, 463
Rationalisation, 128
Real wages, 273
Reflation, 376
Registered capital, 139
Regressive tax, 530
Relation with other sciences, 8
Relative wages, 382
Rent and economic progress, 269
  ,, and interest, 270
  ,, meaning, 259
  ,, and price, 266
  ,, modern theory of, 264
  ,, of buildings, 267
  ,, of mines, quarries and fisheries, 268
  ,, quasi, 268
  ,, Ricardian theory of, 260
Representative firm, 199
Repudiation, 576
Reserve Bank balance sheet, 409-10
Reserve price, 182
Residual claimant theory of wages, 276
Returns, constant, 127
  ,, diminishing, 121
  ,, increasing, 126
  ,, influence on value of laws of, 213
Revenue, anticipatory, 528
  ,, derivative, 528
  ,, direct, 528
Revenue argument for protection, 448
Reverse Councils, 351
Ring, 147
Roundabout production, 107
Russian experiment, The, 607

S

Sales tax, 567
Saving and interest, 315
  ,, and investment, 493
  ,, forced and voluntary, 316
Savings banks, 399
Scale of production, 112
Scheduled banks, 417
Scientific management, 128
Seigniorage, 341
Self-sufficiency argument for protection 449
Selling costs, 240-243
Shares and share capital, 139
Shifting of tax, 552
Silver standard, 349
Single tax, 548
Sinking fund, 576
Sliding scale, 289
Small-scale production, 116-117
Social income and output, 493
Social insurance, 298
Social security, 299
Social wealth, 23
Socialism, 596
  ,, answers to critics of, 603

Socialism case against, 601
,, fabian, 600
,, guild, 598
,, Marxian or scientific, 597
,, progress of, 605
,, in Russia, 507
,, State, 597
Special assessment, 529
Specie points, 463
Specific tax, 523
Speculation, 162
,, benefits and dangers of, 164
Spot rate, 177
Standstill agreement, 477
Standard currency exchange, 360
,, full gold, 350
,, gold bullion, 350
,, gold exchange, 351
,, gold parity, 353
,, silver, 349
Standard money, 342
Standard of living, 29
State activity, 511
State enterprise, 143
State functions, 514
State intervention, 515
Stocks exchange, advantages of, 161
,, ,, organisation, 160
Subjective causes of unemployment, 295
Subscribed capital, 139
Subsidiary coins, 341
Subsistence theory of wages 274
Substitution, law of, 40
Substitution, limitation of, 50
,, ,, importance of, 49
,, ,, marginal rate of, 48
Sunk capital, 106
Supplementary costs, 168
Supply and stock, 167
,, causes of changes in, 174
,, supply curve, 171
,, a peculiar, curve of, 176
,, elasticity of, 173
increase and decrease in, 171
,, law of, 171
Syndicalism, 598

T

Tariffs, 451
Taussig's theory of wages, 280
Tax, *ad valorem*, 531
,, defined, 528
Tax degressive, 531
Tax on buildings, 561
,, on commodities, 557
,, good tax system a, 535
,, Indian, 537
,, differentiation, 568
,, on imports and exports, 560
,, on income, 564
,, on interest, 564
,, on land, 560
,, on monopoly, 558
,, on profits, 565
,, on wages, 566
Tax progressive, 530
,, proportional, 530
,, regressive, 530
,, single, 548
,, specific, 531
,, differentiation, 568
Taxation, canons of, 531
,, certainty in, 532
,, convenience in, 532
,, diffusion theory of, 556
,, diversity in, 535
,, economy in, 533
,, elasticity in, 534
,, equality in, 531
,, incidence of, 552
,, justice in, 539
,, local, 549
,, progressive, 530
,, proportional, 530
Taxable capacity, 545
,, ,, factors of, 517
Taxes, direct and indirect, 531, 553
Telegraphic transfers, 162
Time element, importance of, 191
Time study, 128
Trade, balance of, 453
,, foreign, 433
Trade free, 445
,, international, 433
Trade cycle, 497
,, ,, characteristics of, 499
,, ,, course of a, 497
,, ,, Fiscal policy, 506
,, ,, International measures, 509
,, ,, Modern theory of 500, 502
,, ,, and acceleration principle, 500
,, Monetary policy, 505
,, ,, Remedies of, 504
Trade Unions, 285
,, ,, and wages, 285
,, ,, merits and demerits of, 286
Transfer Costs, 205
Transfer earnings, 270
Transfer moratorium, 477
Treasury bills, 571
Trust, 146

U

Uncertainty bearing, 327
Under population, 89
Unemployment, 295
,, causes of, 295
Unemployment types of, 487
,, ,, Frictional, 489
,, ,, Keynsian, 489
,, ,, Marxian, 487
,, ,, seasional, 489
Unemployment-remedies, 296
,, ,, policy regarding, 496
Unfavourable exchange, 468
Unit of account, 343
Unproductive labour, 85
Utility, 19

Utility marginal, 34
,, measurement of, 38
,, theory of value, 212

V

Value, 20
Value, cost of production theory of, 210
,, cost of reproduction theory of, 211
,, in exchange, 20
,, in use, 20
,, in composite demand, 218
,, in composite supply, 218
,, in joint demand, 216
,, in joint supply, 215
,, influence of laws of return on, 213
,, labour theory of, 207
,, marginal utility theory of, 212
,, Marshall's theory of, 191
,, Marx's theory of surplus, 208
,, of money, 362
,, Possibility of a general rise in, 20
,, Theory of general equilibrium, 201
,, under imperfect competition, 237
Value, under monopoly, 220
Variable costs, 168
Velocity of circulation, 363
Vertical Combinations, 146
Voluntary savings, 316
Volume of production, factors determining the, 79-80
Volume of credit, 395
Volume of Employment, 490

W

Wants, 27
,, characteristics of, 27-28
Wants classification, 28
Wages and efficiency, 281
Wages and inventions, 281
,, and the standard of living, 281
,, causes of difference in relative, 282
,, definition, 273
,, fund theory, 275
,, in Russia, 610
,, influence of supply on, 277
,, fluctuations, 280
,, limitations of the marginal productivity theory of, 278
,, marginal productivity theory of, 276
,, methods of payments of, 273
,, modern theory of, 279
,, nominal *versus* real, 273
,, of women, 283
,, problem of relative, 282
,, Residual Claimant Theory of, 274
,, Subsistence Theory of, 274
,, Taussig's theory of, 280
Waiting, 304
Wants, Human, 27
War finance, 581
Ways and means advances, 571
Wealth and capital, 105
,, and welfare, 23
,, and income, 23
,, classified, 22
,, meaning of, 20
Weighting, 379
Welfare state, 611
Works councils, 290

Z

Zero rate of interest, 319